STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 106942

TO: Ralph J Gitomer Location: CM1/11D11&10B01 Art Unit: 1651 Monday, November 10, 2003 Case Serial Number: 09/918230	From: Alex Waclawiw Location: Biotech-Chem Library CM1-6A02 Phone: 308-4491 Alexandra.waclawiw@uspto.gov

Search Notes

sira
Search and Information Resources Administration

106942

Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: R Gitomer Examiner #: 69630 Date: 10/28/03
Art Unit: 1651 Phone Number 308-0732 Serial Number: 09/918,230
Mail Box and Bldg/Room Location: 11B01 / 11D11 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only** Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

****

STAFF USE ONLY

Searcher: Point of Contact: Alexandra Waclawiw
Searcher Phone #: Technical Info. Specialist CM1 6A02 Tel: 308-4491
Searcher Location: _____
Date Searcher Picked Up: 11-10-03
Date Completed: 11-10-03
Searcher Prep & Review Time: 15
Clerical Prep Time: _____
Online Time: 31

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) _____
Bibliographic ✓
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN 5200.00
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PMP 0 15
@ 11
20
35

PTO-1590 (8-01)

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=> d his

     (FILE 'HOME' ENTERED AT 10:06:42 ON 10 NOV 2003)

     FILE 'REGISTRY' ENTERED AT 10:06:47 ON 10 NOV 2003
L1            1 S 9012-42-4

     FILE 'HCAPLUS' ENTERED AT 10:07:25 ON 10 NOV 2003

     FILE 'CAPLUS' ENTERED AT 10:07:27 ON 10 NOV 2003
L2        26676 S L1 OR ADENYL? (2A) CYCLASE
L3        44907 S ( G OR GUANINE NUCLEOTIDE ) (L) PROTEIN#
L4          620 S GS ALPHA OR GSALPHA OR G S ALPHA
L5          560 S L4 AND L2
L6         8051 S L3 AND L2
L7        18510 S ANTIDEPRESS?
L8            4 S L5 AND L7
L9           47 S L6 AND L7
L10           4 S THERAP? AND L9
L11           7 S L8 OR L10
L12       51066 S MARKER?
L13          96 S (EFFECTIV? OR EFFICACY) (L) L7 (L) (THERAP? OR TREATMENT?)
L14           1 S L13 AND L2 AND (L3 OR L4)
L15         450 S L12 AND (L3 OR L4)
L16          34 S L2 (L) L12
L17          17 S L15 AND L16
L18           1 S L17 AND L7
L19       21214 S DEPRESSION
L20           1 S L19 AND L17
L21           8 S L11 OR L14 OR L18 OR L20
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=> fil reg
FILE 'REGISTRY' ENTERED AT 10:16:22 ON 10 NOV 2003
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    9 NOV 2003  HIGHEST RN 614715-63-8
DICTIONARY FILE UPDATES:   9 NOV 2003  HIGHEST RN 614715-63-8

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d que l1;d l2
L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  9012-42-4



YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS' - CONTINUE? (Y)/N:end

=> d l1

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS on STN
RN   9012-42-4  REGISTRY
CN   Cyclase, adenylate (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Adenyl cyclase
CN   Adenylate cyclase
CN   Adenylyl cyclase
CN   E.C. 4.6.1.1
MF   Unspecified
CI   MAN
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
       CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CIN, CSCHEM, EMBASE,
       IFICDB, IFIPAT, IFIUDB, IPA, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
          19838 REFERENCES IN FILE CA (1907 TO DATE)
             43 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          19851 REFERENCES IN FILE CAPLUS (1907 TO DATE)


=> fil caplus
FILE 'CAPLUS' ENTERED AT 10:16:36 ON 10 NOV 2003
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FILE COVERS 1907 - 10 Nov 2003 VOL 139 ISS 20
FILE LAST UPDATED: 9 Nov 2003 (20031109/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

=> d his;

(FILE 'HOME' ENTERED AT 10:06:42 ON 10 NOV 2003)

FILE 'REGISTRY' ENTERED AT 10:06:47 ON 10 NOV 2003
L1 1 S 9012-42-4

FILE 'HCAPLUS' ENTERED AT 10:07:25 ON 10 NOV 2003

FILE 'CAPLUS' ENTERED AT 10:07:27 ON 10 NOV 2003
L2 26676 S L1 OR ADENYL? (2A) CYCLASE
L3 44907 S (G OR GUANINE NUCLEOTIDE) (L) PROTEIN#
L4 620 S GS ALPHA OR GSALPHA OR G S ALPHA
L5 560 S L4 AND L2
L6 8051 S L3 AND L2
L7 18510 S ANTIDEPRESS?
L8 4 S L5 AND L7
L9 47 S L6 AND L7
L10 4 S THERAP? AND L9
L11 7 S L8 OR L10
L12 51066 S MARKER?
L13 96 S (EFFECTIV? OR EFFICACY) (L) L7 (L) (THERAP? OR TREATMENT?)
L14 1 S L13 AND L2 AND (L3 OR L4)
L15 450 S L12 AND (L3 OR L4)
L16 34 S L2 (L) L12
L17 17 S L15 AND L16
L18 1 S L17 AND L7
L19 21214 S DEPRESSION
L20 1 S L19 AND L17
L21 8 S L11 OR L14 OR L18 OR L20

FILE 'REGISTRY' ENTERED AT 10:16:22 ON 10 NOV 2003

FILE 'CAPLUS' ENTERED AT 10:16:36 ON 10 NOV 2003

=> d que nos l21
L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON 9012-42-4
L2 26676 SEA FILE=CAPLUS ABB=ON PLU=ON L1 OR ADENYL?/OBI (2A) CYCLASE/OBI
L3 44907 SEA FILE=CAPLUS ABB=ON PLU=ON (G/OBI OR GUANINE NUCLEOTIDE/OBI) (L) PROTEIN#/OBI
L4 620 SEA FILE=CAPLUS ABB=ON PLU=ON GS ALPHA/OBI OR GSALPHA/OBI OR G S ALPHA/OBI
L5 560 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND L2
L6 8051 SEA FILE=CAPLUS ABB=ON PLU=ON L3 AND L2
L7 18510 SEA FILE=CAPLUS ABB=ON PLU=ON ANTIDEPRESS?/OBI
L8 4 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L7
L9 47 SEA FILE=CAPLUS ABB=ON PLU=ON L6 AND L7
L10 4 SEA FILE=CAPLUS ABB=ON PLU=ON THERAP?/OBI AND L9
L11 7 SEA FILE=CAPLUS ABB=ON PLU=ON L8 OR L10
L12 51066 SEA FILE=CAPLUS ABB=ON PLU=ON MARKER?/OBI
L13 96 SEA FILE=CAPLUS ABB=ON PLU=ON (EFFECTIV?/OBI OR EFFICACY/OBI) (L) L7 (L) (THERAP?/OBI OR TREATMENT?/OBI)
L14 1 SEA FILE=CAPLUS ABB=ON PLU=ON L13 AND L2 AND (L3 OR L4)
L15 450 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND (L3 OR L4)

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L16          34 SEA FILE=CAPLUS ABB=ON  PLU=ON  L2 (L) L12
L17          17 SEA FILE=CAPLUS ABB=ON  PLU=ON  L15 AND L16
L18           1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L17 AND L7
L19       21214 SEA FILE=CAPLUS ABB=ON  PLU=ON  DEPRESSION/OBI
L20           1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L19 AND L17
L21           8 SEA FILE=CAPLUS ABB=ON  PLU=ON  L11 OR L14 OR L18 OR L20


=> d .ca l21 1-8

L21  ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         2003:796737  CAPLUS
DOCUMENT NUMBER:          139:302009
TITLE:                    Methods of screening for ligands to human G
                          protein coupled receptor GPR7 and their
                          diagnostic and therapeutic use
INVENTOR(S):              Brezillon, Stephane; Lannoy, Vincent; Dupriez,
                          Vincent; Franssen, Jean-denis; Detheux, Michel;
                          Parmentier, Marc; Le Poul, Emmanuel
PATENT ASSIGNEE(S):       Euroscreen Sa, Belg.
SOURCE:                   PCT Int. Appl., 114 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
     WO 2003082907      A1   20031009      WO 2003-EP3272   20030328
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
             NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
             GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                    EP 2002-447054   A  20020329
                                          EP 2002-447161   A  20020822
AB   The present invention is related to a drug screening methods which use the
     orphan G protein coupled receptor GPR7, and peptide ligands L7, L7C, L8
     and L8C to identify agonist and antagonist compds. applicable to a
     diagnosis, prevention and/or treatment of various diseases and disorders.
     The invention further relates to assays for the identification of agents
     that modulate GPR7 ligand binding and signaling activity, as well as
     compns. consisting essentially of an isolated GPR7 protein and an isolated
     ligand.  The invention also relates to diagnostic methods and kits that
     take advantage of the novel interaction of GPR7 with peptide ligands.
IC   ICM  C07K014-00
     ICS  G01N033-50; C12N015-63; C12N015-861; C12N005-10; C07K016-00;
          A01K067-00
CC   1-1 (Pharmacology)
     Section cross-reference(s): 3, 6, 13, 14
ST   G protein coupled receptor GPR7 ligand drug screening;
     therapy diagnosis disease GPR7 ligand; sequence cDNA human
     G protein coupled receptor GPR7
IT   mRNA
     RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
     (Biological study); USES (Uses)
        (GPR7, tissue distribution of; methods of screening for ligands to
        human G protein coupled receptor GPR7 and their
        diagnostic and therapeutic use)
IT   Brain, disease
```

(Gilles de la Tourette syndrome, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Nervous system, disease
(Huntington's chorea, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Fluorescent substances
Radioactive substances
(L7, L7C, L8 and L8C peptides labeled with; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Enzymes, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L7, L7C, L8 and L8C peptides labeled with; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Ligands
RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L7, L7C, L8 and L8C peptides, for GPR7; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Peptides, biological studies
RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L7, L7C, L8 and L8C, as ligands for GPR7; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Brain
(amygdaloid body, disorder, inhibitors of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Heart, disease
(angina pectoris, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Carbohydrates, biological studies
Lipids, biological studies
Nucleic acids
Peptide nucleic acids
Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as effector of GPR7; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Infection
(bacterial; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Prostate gland, disease
(benign hyperplasia, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Mental disorder
(bipolar disorder, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Cell membrane
(budding, virus-induced, use in drug screening assays; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Appetite
(bulimia, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic

and **therapeutic** use)
IT Brain
(cerebellum, disorder, inhibitors of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Intestine, disease
(colon, inhibitors of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Artery, disease
(coronary, restenosis; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Nervous system, disease
(degeneration, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Disease, animal
(degenerative, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Mental disorder
(delirium, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Mental disorder
(dementia, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Mental disorder
(depression; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Diglycerides
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(detecting change in level of activity, in screening assays; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Second messenger system
(detecting change in level of second messenger, in screening assays; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Test kits
(diagnostic, for modulator screening; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Trachea (anatomical)
(disease, inhibitors of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Brain
Testis
(disorder, inhibitors of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Cell migration
(disorder, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Development, mammalian postnatal
(disorder, regulatory function of growth and; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Animal tissue
(drug screening in; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and

therapeutic use)
IT High throughput screening
(drug; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Nervous system, disease
(dyskinesia, inhibitors; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Embryo, animal
(embryogenesis, fetus development; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Heart, disease
(failure, acute, inhibitors; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT cDNA sequences
(for GPR7 of human; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT cDNA
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(for GPR7; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Brain
(frontal cortex, disorder, inhibitors of; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Bone
(healing, promoters of; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Drug screening
(high throughput; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Phosphatidylinositols
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(hydrolysis, detecting change in level of activity, in screening assays; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Brain
(hypothalamus, disorder, inhibitors of; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Heart, disease
(infarction, inhibitors; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Fungi
Protozoa
(infection; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Liver, disease
Pituitary gland, disease
Spinal cord, disease
(inhibitors of; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)
IT Allergy
Alzheimer's disease
Aneurysm

Anorexia
Autoimmune disease
Fertility
Hypertrophy
Nervous system, disease
Osteoporosis
Schizophrenia
Ulcer
Vomiting
(inhibitors; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Bioassay
(label displacement, for drug screening;; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Animal cell
(mammalian, expressing GPR7, use in screening assays; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Neoplasm
(metastasis, inhibitors; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Analgesics
Anti-inflammatory agents
Antiasthmatics
Antibiotics
Anticoagulants
Antidepressants
Antidiabetic agents
Antihypotensives
Antiobesity agents
Antiparkinsonian agents
Antitumor agents
Antiviral agents
Anxiety
Anxiolytics
Arteriosclerosis
Asthma
Cardiovascular agents
Cardiovascular system, disease
Diabetes insipidus
Diabetes mellitus
Disease, animal
Fertility
Fungicides
Human
Human immunodeficiency virus 1
Human immunodeficiency virus 2
Hypertension
Hypotension
Inflammation
Neoplasm
Obesity
Pain
Parkinson's disease
Protozoacides
Thrombosis
Wound healing
Wound healing promoters
(methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT **G protein**-coupled receptors
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Headache
(migraine, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Diagnosis
(mol.; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Antibodies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal, to GPR7; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT **Protein** sequences
(of GPR7 of human; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Molecular association
(of L7, L7C, L8 and L8C peptides and GPR7; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Infection
(protozoa; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Mental disorder
(psychosis, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Intestine
(rectum, disease, inhibitors of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Mental retardation
(severe, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Organic compounds, biological studies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(small, as effector of GPR7; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Intestine, disease
(small, inhibitors of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Cell proliferation
(smooth muscle, disease, excessive or reduced; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Muscle
(smooth, loss of; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Brain, disease
(stroke, inhibitors; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Liposomes
(synthetic, use in screening assays; methods of screening for ligands to human G **protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Antibodies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(to GPR7; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Mammalia
(transgenic, drug screening in; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Urinary tract, disease
(urinary frequency, inhibitors; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Fluorescence quenching
Fluorescence resonance energy transfer
Polarized fluorescence
Surface plasmon resonance
(use in drug screening; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Aequorins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(use in drug screening; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Reporter gene
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(use in screening assays; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT Infection
(viral; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 434897-64-0
RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L7 peptide sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 434897-70-8
RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L7C peptide sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 383415-79-0
RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L8 peptide sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 383415-80-3
RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L8C peptide sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 610803-58-2, **G protein**-coupled receptor GPR7 (human)
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 7440-70-2, Calcium, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(intracellar, second messenger, detecting change in level of activity, in screening assays; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 400655-20-1, **Protein** kinase GRK7
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 73-40-5, **Guanine**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**nucleotide** binding or exchange activity, in screening assays; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 610803-59-3
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 60-92-4, CAMP 506-32-1D, Arachidonic acid, derivs. **9012-42-4**, **Adenylate cyclase** 27121-73-9, Inositol triphosphate 80449-02-1, Tyrosine kinase 141436-78-4, **Protein** Kinase C 142243-02-5, MAP kinase
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(second messenger, detecting change in level of activity, in screening assays; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 610804-24-5, 2: PN: WO03082907 SEQID: 2 unclaimed DNA 610804-25-6, 4: PN: WO03082907 SEQID: 4 unclaimed DNA 610804-26-7, 6: PN: WO03082907 SEQID: 6 unclaimed DNA 610804-27-8, 8: PN: WO03082907 SEQID: 8 unclaimed DNA 610804-28-9 610804-30-3 610804-31-4 610804-32-5 610804-33-6 610804-34-7 610804-35-8 610804-36-9
RL: PRP (Properties)
(unclaimed nucleotide sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 610804-29-0
RL: PRP (Properties)
(unclaimed **protein** sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

IT 81156-93-6 612045-91-7 612045-92-8
RL: PRP (Properties)
(unclaimed sequence; methods of screening for ligands to human **G protein** coupled receptor GPR7 and their diagnostic and **therapeutic** use)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:435383 CAPLUS
DOCUMENT NUMBER: 139:18342
TITLE: Collections of transgenic animal lines with subsets of cells characterized by expression of an endogenous **marker** gene and uses
INVENTOR(S): Serafini, Tito Andrew
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 77 pp., Cont.-in-part of U.S. Ser. No. 783,487.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003106074	A1	20030605	US 2002-77025	20020214
US 2003051266	A1	20030313	US 2001-783487	20010214

PRIORITY APPLN. INFO.: US 2001-783487 A2 20010214

AB Collections of transgenic animals in which a transforming expression cassette is integrated, either at random or by homologous recombination, in a no. of sites across the genome are described. The animals are transformed with a dicistronic expression cassette that includes a marker gene that can be used to characterize the animal and a selectable or screenable marker such as an antibiotic resistance. The two genes are coexpressed, e.g. by using a single promoter and an internal ribosome entry site. Such transgenic animals can then be used to detect, isolate and/or select pure populations of cells having a particular functional characteristic. The isolated cells have uses in gene discovery, target identification and validation, genomic and proteomic anal., etc.

IC ICM A01K067-033
ICS A01K067-027

NCL 800008000; 800014000

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 1, 2, 9, 13, 14

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(5HT5B, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRA1A, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRA1B, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRA1C, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRA1D, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRA2A, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRA2B, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells

characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRA2C, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRB1, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRB2, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ADRB3, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Potassium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ATP-sensitive, HCN1, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Bombesin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(BRS3, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Bradykinin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B1, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Bradykinin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B2, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Calbindins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CALB1, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Calretinin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CALB2, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Calcitonin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CALCR, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Hypothalamic hormones
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CART (cocaine and amphetamine regulated transcript) , characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Cholecystokinin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CCKA, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Cholecystokinin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CCKB, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Cannabinoid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CNR1, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Nucleic acid hybridization
(DNA-mRNA, microarray, in drug screening; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Calbindins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D28k, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D4, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D5, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Cytometry
(FACS (fluorescence-activated cell sorting), cell isolating by; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT GABA receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABAD, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT GABA receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABAE, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT GABA receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABAG, G1, G2, G3, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT GABA receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABAP, .pi. subunit, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(GABAergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT GABA receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABAA, A2, A3, A4, A5, A6, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT GABA receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABAB, B1, B2, B3, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFRA1, GFR.alpha.1, characteristic **marker** for transgenic mouses; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFRA2, GFR.alpha.2, characteristic **marker** for transgenic mouses; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFRA3, GFR.alpha.3, characteristic **marker** for transgenic mouses; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFR.alpha.-1, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(GFR.alpha.-2, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFR.alpha.-3, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Growth hormone-releasing hormone receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GHRHR, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT **G protein**-coupled receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLP1R, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glucagon receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLPR, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gonadotropin-releasing hormone receptor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GNRHR, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Galanin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GalR1, GalR2, GalR3, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GluR1 subunit, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GluR2 subunit, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GluR3 subunit, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GluR4 subunit, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GluR5 subunit, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(GluR6 subunit, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GluR7 subunit, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Histamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(H1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Histamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(H2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Histamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(H3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(IRES (internal ribosomal entry site) element, operably linked to reporter gene; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Potassium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IsK (slowly activating potassium ion channel), Isk-related, KCNE1, KCNE1L, KCNE2, KCNE3, KCNE4, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Potassium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kv1 (potassium channel-forming, voltage-regulated, 1), as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Calcium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(L-type, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Muscarinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(M1, CHRM1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Muscarinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(M2, CHRM2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Muscarinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(M3, CHRM3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Muscarinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(M4, CHRM4, gene for, as **marker**; collections of transgenic

animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Muscarinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (M5, CHRM5, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NES, for nestin, characteristic **marker** for transgenic mouses; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NMDA-binding, NR2A, NR2B, NR2C, NR2D, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NPPA, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Atrial natriuretic peptide receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NPR-A, NPR1, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Atrial natriuretic peptide receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NPR-B, NPR2, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Atrial natriuretic peptide receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NPR3, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NTRK2, Trk-B, characteristic **marker** for transgenic mouses; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotensin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NTSR1 and NTSR2, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (ORL1 (opioid receptor-like receptor), characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (ORL1 (opioid receptor-like 1), gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Oxytocin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(OXTR, characteristic **marker** for transgenic mouse;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Calcium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(P-type, CACNA1A-P/Q, characteristic **marker** for transgenic
mouse; collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PACAP, as characteristic **marker** for transgenic mouse;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Parvalbumins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PVALB, characteristic **marker** for transgenic mouse;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Purinoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(P2, characteristic **marker** for transgenic mouse protein as;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Purinoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(P2X, P2RX1, P2RX3, P2RX4, P2RX5, P2RXL1, P2RX7, characteristic
marker for transgenic mouse; collections of transgenic animal
lines with subsets of cells characterized by expression of endogenous
marker gene and uses)
IT Purinoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(P2Y, P2RY1, P2RY2, P2RY11, characteristic **marker** for
transgenic mouse; collections of transgenic animal lines with subsets
of cells characterized by expression of endogenous **marker**
gene and uses)
IT Purinoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(P2Y4, P2RY4, characteristic **marker** for transgenic mouse;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Purinoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(P2Y6, P2RY6, characteristic **marker** for transgenic mouse;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Purinoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(P2Z, P2RX7, characteristic **marker** for transgenic mouse;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SCIP, characteristic **marker** for transgenic mouses;
collections of transgenic animal lines with subsets of cells
characterized by expression of endogenous **marker** gene and
uses)
IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SCIP, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(SLC6A2, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Somatostatin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSTR1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Somatostatin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSTR2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Somatostatin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSTR3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Somatostatin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSTR4, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Somatostatin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSTR5, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Potassium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Shaker, isoforms, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Shh, sonic hedgehog, characteristic **marker** for transgenic mouses; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Tachykinin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TACR2, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TrkA, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TrkB, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TrkC, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT VIP receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(VIP1, VIPR1, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT VIP receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(VIP2, VIPR2, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Ion channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(VR-OAC (vanilloid receptor-related osmotically activated channel), characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(VRL-1 (vanilloid receptor-like 1), characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Vasopressin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(V1b, AVPR1B, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Vasopressin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(V1a, AVPR1A, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Vasopressin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(V2, AVPR2, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neuropeptide Y receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Y4, Y5 and Y6, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neuropeptide Y receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Y1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neuropeptide Y receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Y2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(activator of reporter gene, transgene encoding; collections of

transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(adrenergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(affective, schizoaffective disorder, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Behavior
(aggressive, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Drug screening
(application; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Potassium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Escherichia coli
(as expression host, reporter gene carried out in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(attention deficit disorder, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(bipolar disorder, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Potassium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(calcium-activated, large conductance isoforms, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Nervous system
(cells, from transgenic animals; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Behavior
Disease, animal
Fasting
Feeding
Mental disorder
Pain
Physiology, animal
Schizophrenia
Sexual behavior
Sleep
(characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Calcium-binding proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(characteristic **marker** for transgenic mouse protein as;

collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Capsaicin receptors
Gastrin-releasing peptide receptors
Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(cholinergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Atrial natriuretic peptide receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(clearance, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Animal cell line
(collection, expressing reporter gene; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transgene
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(comprising reporter gene followed by animal line characterizing endogenous gene; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(corticotropin-releasing factor-binding, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dopamine-transporting, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(dopaminergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glycine receptors
Hedgehog protein
Leptin receptors
Pituitary **adenylate cyclase**-activating polypeptide receptor
Sodium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Anxiety
(generalized, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transport proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(glutamate transporter SLC1A2, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal

lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (glutamate-aspartate transporter, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (glutamate-transporter, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(glutamatergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(glycinergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (green fluorescent, gene for, as selectable **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(histaminergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(hypochondria, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (ionotropic, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Chloride channel
RL: BSU (Biological study, unclassified); BIOL (Biological study) (isoforms, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (kainate-binding, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT BAC (bacterial artificial chromosome)
Genetic vectors
(library, for making transgenic animals; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Pituitary hormone receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (melanocortin receptor 3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Pituitary hormone receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(melanocortin receptor 4, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR4, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR5, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR6, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR7, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(nestins, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(neurotic **depression**, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(noradrenergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(norepinephrine transporter, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(obsession-compulsion, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(opioid-somatostain-like, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with

subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(orexin, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Hormone receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(pancreatic polypeptide, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Anxiety
(panic disorder, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(peptidergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(personality disorder, schizotypal, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(phobia, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurophysins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(prepropressophysins, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(psychosis, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(schizoaffective, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(serotonin transporter, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Neurotransmission
(serotoninergic, signaling pathways of, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Hedgehog protein
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(sonic, neurotransmission, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(sortilin-1, gene for, characteristic **marker** for transgenic mouses; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Animal
Mouse
(transgenic, contg. transformation construct, collection of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT5B, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT1A, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT1B, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT1D, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT1E, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2A, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2B, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2C, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT3, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT4, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT5A, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT6, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT7, characterizing genes for; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Bombesin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type BB1, gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Bombesin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type BB2, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Cannabinoid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type CB1, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Corticotropin releasing factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type I, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Pituitary **adenylate cyclase**-activating polypeptide receptor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type II, VIPR1, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Corticotropin releasing factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type II, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Pituitary **adenylate cyclase**-activating polypeptide receptor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type III, VIPR2, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Tachykinin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type NK3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Mental disorder
(unipolar **depression**, characteristic **marker** for transgenic mouse implicated in; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(urotensin, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Sodium channel
RL: BSU (Biological study, unclassified); BIOL (Biological study) (voltage-gated, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.kappa.-opioid, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.1, CHRNA1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.2, CHRNA2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.3, CHRNA3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.4, CHRNA4, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.5, CHRNA5, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.7, CHRNA7, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.beta.1, CHRNB1, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.beta.2, CHRNB2, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.beta.3, CHRNB3, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.beta.4, CHRNB4, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (.gamma., CHRNG, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)
IT Nicotinic receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.delta., CHRND, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.delta.-opioid, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Nicotinic receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.epsilon., CHRNE, gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.mu.-opioid, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 50-56-6, Oxytocin, biological studies 1393-25-5, Secretin 37221-79-7, Vasoactive intestinal peptide 93443-35-7, Preproenkephalin 115833-17-5, Preprodynorphin 119418-04-1, Galanin 130810-91-2, Preprourotensin II
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 9007-92-5, Glucagon, biological studies 51110-01-1, Somatostatin 55963-74-1, Proglucagon 102577-19-5, Neuromedin B 102577-25-3, Neuromedin N 123626-67-5, Endothelin 1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene for, as characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 9011-97-6, Cholecystokinin 9013-38-1, Dopamine .beta.-hydroxylase 9015-71-8, Corticoliberin 9034-39-3, Somatoliberin 9036-22-0, Tyrosine hydroxylase 66796-54-1, Proopiomelanocortin 67382-96-1, Melanin-concentrating hormone 80043-53-4, Gastrin releasing peptide 82785-45-3, Neuropeptide Y 85637-73-6, Atriopeptin 86933-74-6, Neurokinin A 99566-27-5, Neuropeptide FF 101405-69-0, PreproGastrin releasing peptide 102577-23-1, Neurokinin B 137061-48-4, Pacap 193830-48-7, Urocortin 205599-75-3, Orexin A
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene for, as **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 9073-60-3, .beta.-Lactamase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene for, as selectable **marker**; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 9034-40-6, Gonadotropin-releasing hormone 83652-28-2, CGRP
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene for, characteristic **marker** for transgenic mouse; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 9037-21-2, Tryptophan hydroxylase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(neurotransmission, characteristic **marker** for transgenic mouse protein part of; collections of transgenic animal lines with subsets of cells characterized by expression of endogenous **marker** gene and uses)

IT 538441-69-9 538441-70-2 538441-71-3 538441-72-4 538441-73-5

538441-74-6 538441-75-7 538441-76-8 538441-77-9 538441-78-0
538441-79-1 538441-80-4 538441-81-5
RL: PRP (Properties)
(unclaimed nucleotide sequence; collections of transgenic animal lines with subsets of cells characterized by expression of an endogenous **marker** gene and uses)

L21 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:107680 CAPLUS
DOCUMENT NUMBER: 136:145271
TITLE: **Marker** for **antidepressant therapy** and methods related thereto
INVENTOR(S): Rasenick, Mark M.; Donati, Robert J.; Toki, Sadamu
PATENT ASSIGNEE(S): The Board of Trustess of the University of Illinois, USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010763	A2	20020207	WO 2001-US23851	20010730
WO 2002010763	A3	20030828		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002039752	A1	20020404	US 2001-918230	20010730
EP 1356292	A2	20031029	EP 2001-955013	20010730
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-221874P P 20000729
WO 2001-US23851 W 20010730

AB The present invention relates generally to methods for detg. the effectiveness of ongoing antidepressant therapy via anal. of the assocd. of Gs.alpha. with components of the plasma membrane or cytoskeleton of cells from peripheral tissues of the depressed individual as well as to methods involved in screening for effective antidepressant agents via their ability to cause a difference in the assocn. of Gs.alpha. with components of the plasma membrane or cytoskeleton of cells.

IC ICM G01N033-566
CC 1-11 (Pharmacology)
ST **GSalpha adenylyl cyclase marker antidepressant therapy**
IT **G proteins (guanine nucleotide** -binding **proteins)**
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(Gs (**adenylate cyclase**-stimulating); plasma membrane and cytoskeleton cell **Gs.alpha.** and type VI **adenylyl cyclase** as **markers** for studying the **efficacy** of **antidepressant therapy**)
IT Nerve
(neuron; plasma membrane and cytoskeleton cell **Gs.alpha.** and type VI **adenylyl cyclase** as **markers** for studying the **efficacy** of **antidepressant therapy**)
IT **Antidepressants**

Drug screening
Erythrocyte
Leukocyte
Neuroglia
Platelet (blood)
(plasma membrane and cytoskeleton cell **Gs.alpha.** and type VI **adenylyl cyclase** as **markers** for studying the **efficacy** of **antidepressant therapy**)

IT Fibroblast
(skin; plasma membrane and cytoskeleton cell **Gs.alpha.** and type VI **adenylyl cyclase** as **markers** for studying the **efficacy** of **antidepressant therapy**)

IT **9012-42-4**
RL: ANT (Analyte); ANST (Analytical study)
(plasma membrane and cytoskeleton cell **Gs.alpha.** and type VI **adenylyl cyclase** as **markers** for studying the **efficacy** of **antidepressant therapy**)

IT 50-47-5, Desipramine 50-48-6, Amitriptyline 50-53-3, Chlorpromazine, biological studies 5560-72-5, Iprindole 54910-89-3, Fluoxetine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plasma membrane and cytoskeleton cell **Gs.alpha.** and type VI **adenylyl cyclase** as **markers** for studying the **efficacy** of **antidepressant therapy**)

L21 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:402217 CAPLUS
DOCUMENT NUMBER: 135:205470
TITLE: Chronic treatment of C6 glioma cells with **antidepressant** drugs results in a redistribution of **Gs.alpha.**
AUTHOR(S): Donati, Robert J.; Thukral, Chandrashekhar; Rasenick, Mark M.
CORPORATE SOURCE: Departments of Physiology and Biophysics, College of Medicine, University of Illinois at Chicago, Chicago, IL, USA
SOURCE: Molecular Pharmacology (2001), 59(6), 1426-1432
CODEN: MOPMA3; ISSN: 0026-895X
PUBLISHER: American Society for Pharmacology and Experimental Therapeutics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Previous studies have demonstrated that chronic treatment of C6 glioma cells with the antidepressants desipramine and fluoxetine increases the Triton X-100 soly. of the G protein Gs.alpha.. The antidepressants also caused a 50% decrease in the amt. of Gs.alpha. localized to caveolae-enriched membrane domains. In this study, laser scanning confocal microscopy reveals that Gs.alpha. is localized to the plasma membrane as well as the cytosol in both treated and control cells. However, striking differences are seen in the distribution of Gs.alpha. in the long cellular processes after chronic treatment with these antidepressant drugs. Control cells display Gs.alpha. along the entire process with an esp. high concn. of that G protein at the distal ends. Desipramine- or fluoxetine-treated cells show a more centralized clustering of Gs.alpha. in the Golgi region of the cell and a drastic redn. of Gs.alpha. in the cellular processes. There is no change in the distribution of Go.alpha. after desipramine treatment and the antipsychotic drug chlorpromazine does not alter Gs.alpha.. These results suggest that antidepressant-induced changes in the assocn. of Gs.alpha. with the plasma membrane may translate into altered cellular localization of this signal transducing protein. Thus, modification of the coupling between Gs-coupled receptors and adenylyl cyclase may underlie both antidepressant therapy and depressive illnesses. This report also

suggests that modification of the membrane domain occupied by Gs.alpha. might represent a mechanism for chronic antidepressant effects.
CC 1-11 (Pharmacology)
ST **antidepressant** G protein **Gsalpha** membrane signaling
IT G proteins (guanine nucleotide-binding proteins)
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(Gs (**adenylate cyclase**-stimulating), .alpha.; chronic treatment of C6 glioma cells with **antidepressant** drugs results in a redistribution of **Gs.alpha.**)
IT **Antidepressants**
Cell membrane
Cytoskeleton
Signal transduction, biological
(chronic treatment of C6 glioma cells with **antidepressant** drugs results in a redistribution of **Gs.alpha.**)
IT Cytoplasm
(cytosol; chronic treatment of C6 glioma cells with **antidepressant** drugs results in a redistribution of **Gs .alpha.**)
IT 50-47-5, Desipramine 50-53-3, Chlorpromazine, biological studies 54910-89-3, Fluoxetine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chronic treatment of C6 glioma cells with **antidepressant** drugs results in a redistribution of **Gs.alpha.**)
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:547158 CAPLUS
DOCUMENT NUMBER: 131:281415
TITLE: Treatment of C6 glioma cells and rats with **antidepressant** drugs increases the detergent extraction of **Gs.alpha.** from plasma membrane
AUTHOR(S): Toki, Sadamu; Donati, Robert J.; Rasenick, Mark M.
CORPORATE SOURCE: Departments of Physiology and Biophysics, University of Illinois College of Medicine, Chicago, IL, 60612-7342, USA
SOURCE: Journal of Neurochemistry (1999), 73(3), 1114-1120
CODEN: JONRA9; ISSN: 0022-3042
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Results from previous studies suggested that chronic treatment of rats or C6 glioma cells with antidepressants augments the coupling between Gs and adenylyl cyclase. As these effects on C6 glioma cells are seen in the absence of presynaptic input, several antidepressant drugs may have a direct "postsynaptic" effect on their target cells. It was hypothesized that the target of antidepressant action was some membrane protein that may regulate coupling between G proteins and adenylyl cyclase. To test this, C6 glioma cells were treated with amitriptyline, desipramine, iprindole, or fluoxetine for 3 days. Chlorpromazine served as a control for these treatments. Membrane proteins were extd. sequentially with Triton X-100 and Triton X-114 from C6 glioma cells. Triton X-100 extd. more Gs.alpha. in membranes prepd. from antidepressant-treated C6 glioma cells than from control groups. In addn., cell fractionation studies revealed that the amt. of Gs.alpha. in caveolin-enriched domains was reduced after antidepressant treatment and that adenylyl cyclase comigrated with Gs.alpha. in the gradients. These data suggest that some postsynaptic component that increases availability of Gs to activate effector mols., such as adenylyl cyclase, might be a target of antidepressant treatment.
CC 1-11 (Pharmacology)

ST **antidepressant** G protein **adenylyl cyclase** signaling

IT G proteins (guanine nucleotide-binding proteins)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**adenylate cyclase**-regulating;
antidepressant drug mechanism of action: **Gs** **.alpha.-adenylyl cyclase** signaling mediation)

IT **Antidepressants**
Signal transduction, biological
(**antidepressant** drug mechanism of action: **Gs** **.alpha.-adenylyl cyclase** signaling mediation)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(membrane; **antidepressant** drug mechanism of action: **Gs.alpha.-adenylyl cyclase** signaling mediation)

IT 50-47-5, Desipramine 50-48-6, Amitriptyline 5560-72-5, Iprindole 54910-89-3, Fluoxetine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**antidepressant** drug mechanism of action: **Gs** **.alpha.-adenylyl cyclase** signaling mediation)

IT **9012-42-4, Adenylyl cyclase**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**antidepressant** drug mechanism of action: **Gs** **.alpha.-adenylyl cyclase** signaling mediation)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:465139 CAPLUS
DOCUMENT NUMBER: 127:76557
TITLE: Methods and kits for diagnosis and monitoring treatments of psychiatric disorders
INVENTOR(S): Schreiber-Avissar, Sofia
PATENT ASSIGNEE(S): Ben-Gurion University of the Negev, Israel; Schreiber-Avissar, Sofia
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9720211	A1	19970605	WO 1996-IL166	19961125
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2239115	AA	19970605	CA 1996-2239115	19961125
AU 9676382	A1	19970619	AU 1996-76382	19961125
AU 729117	B2	20010125		
EP 874987	A1	19981104	EP 1996-939287	19961125

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

JP 2000502179 T2 20000222 JP 1997-520334 19961125

PRIORITY APPLN. INFO.: IL 1995-116205 A 19951130
WO 1996-IL166 W 19961125

AB Methods are disclosed for diagnosing psychiatric disorders (mania, depression, panic disorder, and schizophrenia) or gauging the effect of a treatment upon a psychiatric patient that comprise: (1) detg. the function and/or the level of .gtoreq.1 receptor-coupled G-protein and (2) diagnosing the psychiatric disorder or gauging the effect of the treatment upon the patient, based on said detn. in step 1. According to one preferred embodiment of this invention, the function of the receptor-coupled G-protein is measured as an agonist-induced increase in guanine nucleotide-binding capacity in a patient's mononuclear leukocytes, and according to another preferred embodiment, the level of receptor-coupled G-protein is quantified by using antibodies against G.alpha.s or G.alpha.i subunits. The invention also provides kits for carrying out the methods of the invention.

IC ICM G01N033-50
ICS G01N033-566; G01N033-68

CC 2-1 (Mammalian Hormones)
Section cross-reference(s): 1, 14

ST psychiatric disorder biochem diagnosis **therapy** kit; receptor coupled **G protein** mental disorder

IT Dopamine receptors
Muscarinic receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(-coupled **G-protein**; mental disorder diagnosis and **therapy** monitoring methods and kits)

IT **G proteins (guanine nucleotide** -binding **proteins)**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Gi (**adenylate cyclase**-inhibiting), .alpha.-subunit; mental disorder diagnosis and **therapy** monitoring methods and kits)

IT **G proteins (guanine nucleotide** -binding **proteins)**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Gs (**adenylate cyclase**-stimulating), .alpha.-subunit; mental disorder diagnosis and **therapy** monitoring methods and kits)

IT Toxins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cholera; mental disorder diagnosis and **therapy** monitoring methods and kits)

IT Mental disorder
(depression; mental disorder diagnosis and **therapy** monitoring methods and kits)

IT Mental disorder
(mania; mental disorder diagnosis and **therapy** monitoring methods and kits)

IT **Antidepressants**
Cell membrane
Mental disorder
Mononuclear cell (leukocyte)
Schizophrenia
Test kits
Therapy
(mental disorder diagnosis and **therapy** monitoring methods and kits)

IT **G protein**-coupled receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(mental disorder diagnosis and **therapy** monitoring methods and kits)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(mental disorder diagnosis and **therapy** monitoring methods and kits)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(monoclonal; mental disorder diagnosis and **therapy** monitoring methods and kits)
IT Anxiety
(panic disorder; mental disorder diagnosis and **therapy** monitoring methods and kits)
IT Toxins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(pertussis; mental disorder diagnosis and **therapy** monitoring methods and kits)
IT Adrenoceptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.beta.-, -coupled G-**protein**; mental disorder diagnosis and **therapy** monitoring methods and kits)
IT 102394-31-0
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(AF-DX 116; mental disorder diagnosis and **therapy** monitoring methods and kits)
IT 34273-04-6
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(mental disorder diagnosis and **therapy** monitoring methods and kits)
IT 51-61-6, Dopamine, biological studies 462-58-8, Carbamylcholine 7683-59-2, Isoproterenol
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(mental disorder diagnosis and **therapy** monitoring methods and kits)
IT 525-66-6, Propranolol 15676-16-1, Sulpiride 28797-61-7, Pirenzepine 87075-17-0, Sch 23390
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(mental disorder diagnosis and **therapy** monitoring methods and kits)
IT 7439-93-2, Lithium, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mental disorder diagnosis and **therapy** monitoring methods and kits)

L21 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:574553 CAPLUS
DOCUMENT NUMBER: 115:174553
TITLE: Regulation of G proteins by chronic **antidepressant** drug treatment in rat brain: tricyclics but not clorgyline increase GO.alpha. subunits
AUTHOR(S): Lesch, K. Peter; Aulakh, Charanjit S.; Tolliver, Teresa J.; Hill, James L.; Murphy, Dennis L.
CORPORATE SOURCE: Lab. Clin. Sci., Natl. Inst. Ment. Health, Bethesda, MD, 20892, USA
SOURCE: European Journal of Pharmacology, Molecular Pharmacology Section (1991), 207(4), 361-4

CODEN: EJPPET; ISSN: 0922-4106
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of long-term (3-wk) administration of various antidepressant drugs on the steady-state concns. of G protein .alpha. subunits, Gs.alpha., Gi.alpha., and Go.alpha., has been investigated in rat brain using an ELISA. Tricyclic antidepressants and clorgyline decreased Gs.alpha. and, to a lesser extent, Gi.alpha. in several brain regions, while Go.alpha. was increased by tricyclics but not clorgyline. Long-term treatment with antidepressant drugs exerts differential effects on G protein .alpha. subunits, and antidepressant efficacy may potentially be based on functional modifications of signal transduction.
CC 1-11 (Pharmacology)
ST G protein subunit regulation **antidepressant** brain; tricyclic clorgyline **antidepressant** G protein regulation
IT Brain, composition
(G proteins in regions of, tricyclic **antidepressants** and clorgyline regulation of)
IT **Antidepressants**
(tricyclic, G protein regulation by, in brain regions)
IT Phospholipoproteins
RL: BIOL (Biological study)
(**adenylate cyclase**-inhibiting, guanine nucleotide-binding, Gi, .alpha.-subunit, in brain regions, tricyclic **antidepressants** and chlorgyline regulation of)
IT Proteins, specific or class
RL: BIOL (Biological study)
(**adenylate cyclase**-stimulating, guanine nucleotide-binding, **Gs**, **.alpha.**-subunit, in brain regions, tricyclic **antidepressants** and chlorgyline regulation of)
IT Lipoproteins
RL: BIOL (Biological study)
(guanine nucleotide-binding, Go, .alpha.-subunit, in brain regions, tricyclic **antidepressants** and chlorgyline regulation of)

L21 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:106401 CAPLUS
DOCUMENT NUMBER: 108:106401
TITLE: Lithium inhibits adrenergic and cholinergic increases in GTP binding in rat cortex
AUTHOR(S): Avissar, Sofia; Schreiber, Gabriel; Danon, Abraham; Belmaker, R. H.
CORPORATE SOURCE: Clin. Pharmacol. Unit, Ben Gurion Univ. Negev, Beer Sheva, Israel
SOURCE: Nature (London, United Kingdom) (1988), 331(6155), 440-2
CODEN: NATUAS; ISSN: 0028-0836
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The interaction of lithium with G protein function (indicated by [3H]GTP binding stimulated by agonist) was studied. Lithium at therapeutically efficacious concns. completely blocked both adrenergic and cholinergic agonist-induced increases in [3H]GTP binding to membranes from rat cerebral cortex, in both in vitro and ex vivo expts. The same lithium treatments also abolished guanine nucleotide modulation of muscarinic agonist (oxotremorine) binding (an alternative method of showing an effect of lithium on G-protein function). The findings suggest G proteins (Gs and Gi or Go) as the mol. site of action for both the antimanic and antidepressant effects of lithium.
CC 1-11 (Pharmacology)
ST **G protein** brain lithium antimanic **antidepressant**
IT Brain, composition
(**G proteins** of, lithium effect on)
IT Lipoproteins
RL: PRP (Properties)

(**adenylate cyclase**-inhibiting, guanine nucleotide-binding, Gi, function of, of brain, lithium effect on)

IT **Proteins**, specific or class
RL: PRP (Properties)
(**adenylate cyclase**-stimulating, **guanine nucleotide**-binding, Gs, function of, of brain, lithium effect on)

IT Mental disorder
(depression, **therapy** of, lithium effect on brain **G proteins** function in relation to)

IT Mental disorder
(mania, **therapy** of, lithium effect on brain **G proteins** function in relation to)

IT 7439-93-2, Lithium, biological studies 7447-41-8, Lithium chloride, biological studies
RL: BIOL (Biological study)
(**G proteins** of brain response to, **antidepressant** and antimanic mechanism in relation to)

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=> fil wpids
FILE 'WPIDS' ENTERED AT 10:52:54 ON 10 NOV 2003
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FILE LAST UPDATED:          7 NOV 2003      <20031107/UP>
MOST RECENT DERWENT UPDATE:     200372        <200372/DW>
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>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

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     (FILE 'STNGUIDE' ENTERED AT 10:19:53 ON 10 NOV 2003)
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     FILE 'WPIDS' ENTERED AT 10:41:36 ON 10 NOV 2003
L1           24 S GSALPHA OR GS ALPHA OR G S ALPHA
L2          411 S ADENYL? CYCLASE?
L3            6 S L1 AND L2
L4         7367 S ANTIDEPRESS?
L5            1 S L4 AND L1
L6         3263 S G PROTEIN#
L7            3 S L6 AND L2 AND L4
L8           73 S (EFFECTIV? OR EFFICAC?) (S) L4 (S) (THERAP? OR TREATMENT?)
L9            4 S L8 AND (L1 OR L6)
L10           2 S MARKER? (S) L1
L11          17 S  L4 (S) MARKER?
L12           2 S L11 AND (L1 OR L6)
L13          14 S L3 OR L5 OR L7 OR L9 OR L12

     FILE 'WPIDS' ENTERED AT 10:52:54 ON 10 NOV 2003

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                  ALPHA
L2          411 SEA FILE=WPIDS ABB=ON  PLU=ON  ADENYL? CYCLASE?
L3            6 SEA FILE=WPIDS ABB=ON  PLU=ON  L1 AND L2
L4         7367 SEA FILE=WPIDS ABB=ON  PLU=ON  ANTIDEPRESS?
L5            1 SEA FILE=WPIDS ABB=ON  PLU=ON  L4 AND L1
L6         3263 SEA FILE=WPIDS ABB=ON  PLU=ON  G PROTEIN#
L7            3 SEA FILE=WPIDS ABB=ON  PLU=ON  L6 AND L2 AND L4
L8           73 SEA FILE=WPIDS ABB=ON  PLU=ON  (EFFECTIV? OR EFFICAC?) (S) L4
                  (S) (THERAP? OR TREATMENT?)
L9            4 SEA FILE=WPIDS ABB=ON  PLU=ON  L8 AND (L1 OR L6)
L11          17 SEA FILE=WPIDS ABB=ON  PLU=ON  L4 (S) MARKER?
L12           2 SEA FILE=WPIDS ABB=ON  PLU=ON  L11 AND (L1 OR L6)
L13          14 SEA FILE=WPIDS ABB=ON  PLU=ON  L3 OR L5 OR L7 OR L9 OR L12


=> d .wp l13 1-14

L13  ANSWER 1 OF 14  WPIDS  COPYRIGHT 2003 THOMSON DERWENT on STN
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AN 2003-730805 [69] WPIDS
DNC C2003-200993
TI New isolated human SNORF44 nucleic acids and proteins, useful for diagnosing, preventing and/or treating inflammation, arthritis, autoimmune diseases, AIDS, anxiety, asthma, obesity, hypertension, stroke and cancer.
DC B04 D16
IN BONINI, J A; HUANG, L; WILSON, A E
PA (BONI-I) BONINI J A; (HUAN-I) HUANG L; (WILS-I) WILSON A E; (SYNA-N) SYNAPTIC PHARM CORP
CYC 102
PI US 2003143670 A1 20030731 (200369)* 46p
WO 2003070916 A2 20030828 (200369) EN
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
ADT US 2003143670 A1 CIP of US 1999-321683 19990528, US 2002-80263 20020220; WO 2003070916 A2 WO 2003-US5230 20030220
PRAI US 2002-80263 20020220; US 1999-321683 19990528
AB US2003143670 A UPAB: 20031027
NOVELTY - An isolated nucleic acid (I) encoding a mammalian SNORF44 receptor, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) an isolated nucleic acid encoding a human SNORF44 receptor analog;

(2) a purified mammalian SNORF44 receptor protein (II);

(3) a vector comprising (I);

(4) a cell comprising the vector of (3);

(5) an insect cell comprising the vector of (3);

(6) a membrane preparation isolated from the cell of (4) or (5);

(7) a nucleic acid probe comprising at least 15 nucleotides, which probe specifically hybridizes with (I) (the probe has a unique sequence corresponding to a sequence present within 1 of the 2 strands of the nucleic acid encoding the mammalian SNORF44 receptor and are contained in plasmid pcDNA3.1-hSNORF44-f PTA-100, or to a sequence present within a fully defined sequence of 1495 bp or its reverse complement, given in the specification);

(8) a nucleic acid probe comprising at least 15 nucleotides which is complementary to a unique fragment or its antisense sequence to (I);

(9) an antisense oligonucleotide having a sequence capable of specifically hybridizing to the genomic DNA or to the RNA of (I);

(10) an antibody capable of binding to a mammalian SNORF44 receptor encoded by (I);

(11) an agent capable of competitively inhibiting the binding of the antibody of (10) to a mammalian SNORF44 receptor;

(12) a pharmaceutical composition comprising an amount of the oligonucleotide of (9) capable of passing through a cell membrane and effective to reduce expression of a mammalian SNORF44 receptor or to block binding of a ligand to a human SNORF44 receptor, and a carrier capable of passing through the cell membrane;

(13) a transgenic non-human mammal expressing DNA encoding (II), or comprising a homologous recombination knockout of the native mammalian SNORF44 receptor, or an antisense DNA complementary to the DNA encoding a mammalian SNORF44 receptor so placed within the genome as to be transcribed into antisense mRNA which is complementary to mRNA encoding the mammalian fb4la receptor, and which hybridizes to mRNA encoding the mammalian SNORF44 receptor, t hereby reducing its translation;

(14) a process for identifying a chemical compound which specifically binds to a mammalian SNORF44 receptor;

(15) a process involving competitive binding for identifying a chemical compound which specifically binds to a mammalian fb4la receptor;

(16) a compound identified by the process of (14) or (15);

(17) screening a number of chemical compounds not known to bind to a mammalian SNORF44 receptor to identify a compound which specifically binds

to the mammalian SNORF44 receptor;

(18) detecting expression of a mammalian SNORF44 receptor by detecting the presence of mRNA coding for the mammalian SNORF44 receptor;

(19) detecting the presence of a mammalian SNORF44 receptor on the surface of a cell;

(20) determining the physiological effects of varying levels of activity of mammalian SNORF44 receptors;

(21) identifying an antagonist capable of alleviating an abnormality where the abnormality is alleviated by decreasing the activity of a mammalian SNORF44 receptor;

(22) an antagonist identified by the method of (21);

(23) a pharmaceutical composition comprising an antagonist of (22) and a carrier;

(24) treating an abnormality in a subject where the abnormality is alleviated by decreasing the activity of a mammalian SNORF44 receptor, comprising administering a pharmaceutical composition of (23), thereby treating the abnormality;

(25) identifying an agonist capable of alleviating an abnormality in a subject (the abnormality is alleviated by increasing the activity of a mammalian SNORF44 receptor), comprising administering a compound to the transgenic nonhuman mammal of (13), and determining whether the compound alleviates the physical and behavioral abnormalities displayed by the transgenic nonhuman mammal, the alleviation of the abnormality identifying the compound as an agonist;

(26) an agonist identified by the method of (25);

(27) a pharmaceutical composition comprising an agonist identified by the method of (25) and a carrier;

(28) treating an abnormality in a subject where the abnormality is alleviated by increasing the activity of a mammalian SNORF44 receptor, comprising administering to the subject a pharmaceutical composition of (27), thereby treating the abnormality;

(29) diagnosing a predisposition to a disorder associated with the activity of a specific mammalian allele;

(30) preparing (II);

(31) determining whether a chemical compound is a mammalian SNORF44 receptor agonist or antagonist;

(32) a pharmaceutical composition comprising a mammalian SNORF44 receptor agonist or antagonist determined by the process of (31) effective to increase or decrease activity of a mammalian SNORF44 receptor and a carrier;

(33) determining whether a chemical compound specifically binds to and activates or inhibits a mammalian SNORF44 receptor;

(34) a compound determined by the process of (33);

(35) a pharmaceutical composition comprising a mammalian SNORF44 agonist or antagonist determined by the process of (33) and a carrier;

(36) screening a number of chemical compounds not known to activate or inhibit a mammalian SNORF44 receptor to identify a compound which activates or inhibits the mammalian SNORF44 receptor;

(37) a pharmaceutical composition comprising a compound identified by the method of (36) to increase or decrease mammalian SNORF44 receptor activity, and a carrier; and

(38) treating an abnormality in a subject where the abnormality is alleviated by increasing or decreasing the activity of a mammalian SNORF44 receptor, comprising administering to the subject a compound which is a mammalian SNORF44 receptor agonist or antagonist to treat the abnormality.

ACTIVITY - Antiinflammatory; Antiarthritic; Antibacterial; Virucide; Fungicide; Protozoacide; Analgesic; Tranquilizer; Antidepressant; Anti-HIV; Nootropic; Vasotropic; Hypotensive; Antiasthmatic; Antidiabetic; Cytostatic; Immunomodulator; Immunosuppressive; Nephrotropic; Antipsoriatic; Antiparkinsonian; Osteopathic; Neuroprotective; Gastrointestinal; Cardiovascular; Anticonvulsant.

No biological data given.

MECHANISM OF ACTION - G-Protein-Agonist; G-Protein-Antagonist; Gene-Therapy.

USE - The methods and compositions are useful for the diagnosis, prevention and/or treatment of disorders associated with aberrant expression or activity of the SNORF44 receptor protein, such as chronic

and acute inflammation, arthritis, autoimmune diseases, transplant rejection, bacterial, viral, fungal and protozoan infections, AIDS, pain, psychotic and neurological disorders, including anxiety, depression, schizophrenia, dementia and memory loss, asthma, obesity, hypertension, cardiovascular disorders, ischemia, stroke, cancers, ulcers, renal disorders, bone diseases, gastrointestinal disorders, psoriasis, allergies, Parkinson's disease, Alzheimer's disease and Huntington's disease.

Dwg.0/5

TECH UPTX: 20031027

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Nucleic Acid: (I) Is a DNA that is a cDNA, genomic DNA or RNA. The mammalian SNORF44 receptor is a human SNORF44 receptor, where the nucleic acid encodes a human SNORF44 receptor sequence identical to that encoded by the plasmid pcDNA3.1-hSNORF44-f PTA-100 and with a fully defined sequence of 415 amino acids, given in the specification.

Preferred Protein: The SNORF44 receptor protein is a human SNORF44 receptor protein.

Preferred Vector: The vector is adapted for expression in a mammalian, bacterial, amphibian, yeast or insect cell which comprises the regulatory elements necessary for expression of the nucleic acid in the mammalian, bacterial, amphibian, yeast or insect cell operatively linked in the nucleic acid encoding the mammalian SNORF44 receptor as to permit its expression. The vector is preferably a baculovirus.

Preferred Cell: The cell is a non-mammalian cell that is a Xenopus oocyte or melanophore cell. Alternatively, the cell is a mammalian cell, where the cell is a COS-7 cell, a 293 human embryonic kidney cell, a NIH-3T3 cell, a LM(tk-) cell, a mouse Y1 cell or a Chinese Hamster Ovary (CHO) cell.

Preferred Insect Cell: The insect cell is an Sf9, Sf21 or HighFive cell.

Preferred Probe: The nucleic acid is DNA or RNA.

Preferred Oligonucleotide: The oligonucleotide comprises chemically modified nucleotides or nucleotide analogues.

Preferred Antibody: The mammalian receptor SNORF44 receptor is a human SNORF44 receptor.

Preferred Composition: The oligonucleotide in the pharmaceutical composition of (12) is coupled to a substance which inactivates mRNA that is a ribozyme, and where the carrier comprises a structure which binds to a mammalian SNORF44 receptor on a cell capable of being taken up by the cells after binding to the structure.

Preferred Transgenic Mammal: The DNA encoding the mammalian SNORF44 receptor additionally comprises an inducible promoter or a tissue specific regulatory element. The mammal is preferably a mouse.

Preferred Method: The mammalian SNORF44 receptor in any of the processes is a human SNORF44 receptor with a fully defined sequence of 389 amino acids, given in the specification. The cell is an insect or mammalian cell that is non-neuronal in origin (the neuronal cell is a COS-7 cell, a 293 human embryonic kidney cell, a NIH-3T3 cell, a LM(tk-) cell, a mouse Y1 cell or a Chinese Hamster Ovary (CHO) cell.

The process of (14) comprises:

(a) contacting cells containing DNA encoding and expressing on their cell surface the mammalian SNORF44 receptor (the cells do not normally express the mammalian SNORF44 receptor), with the compound under conditions suitable for binding, and detecting specific binding of the chemical compound to the mammalian SNORF44 receptor; or

(b) contacting a membrane fragment from a cell extract of cells containing DNA encoding and expressing on their cell surface the mammalian fb41 a receptor (the cells do not normally express the mammalian SNORF44 receptor), with the compound under conditions suitable for binding, and detecting specific binding of the chemical compound to the mammalian SNORF44 receptor.

The process of (15) comprises separately contacting cells expressing on their cell surface the mammalian SNORF44 receptor or separately contacting a membrane fraction from a cell extract of cells expressing on their cell surface the mammalian lb41 a receptor (the cells do not normally express the mammalian SNORF44 receptor), with both the chemical compound and a second chemical compound known to bind to the receptor, and with only the

second chemical compound, under conditions suitable for binding of both compounds, and detecting specific binding of the chemical compound to the mammalian SNORF44 receptor, a decrease in the binding of the second chemical compound to the mammalian SNORF44 receptor in the presence of the chemical compound indicating that the chemical compound binds to the mammalian SNORF44 receptor.

The process of (31) comprises contacting cells transfected with and expressing DNA encoding the mammalian SNORF44 receptor with the compound under conditions permitting the activation of the mammalian SNORF44 receptor, and detecting an increase or decrease in mammalian SNORF44 receptor activity, therefore determining whether the compound is a mammalian SNORF44 receptor agonist or antagonist.

The process of (33) comprises contacting cells producing a second messenger response and expressing on their cell surface the mammalian SNORF44 receptor (the cells do not normally express the mammalian SNORF44 receptor with the chemical compound under conditions suitable for activation of the mammalian SNORF44 receptor), and measuring the second messenger response in the presence and in the absence of the chemical compound (a change in the second messenger response in the presence of the chemical compound indicating that the compound activates or inhibits the mammalian SNORF44 receptor). The second messenger response comprises chloride channel activation and the change in second messenger is an increase in the level of chloride current or an increase in the measure of intracellular calcium, and further comprises release of inositol phosphate and the change in second messenger is an increase in the level of inositol phosphate.

The mammalian SNORF44 receptor in the method of (17) or (36) is a human SNORF44 receptor with a fully defined sequence of 389 amino acids, given in the specification. The cell is an insect or mammalian cell that is non-neuronal in origin, where the neuronal cell is a COS-7 cell, a 293 human embryonic kidney cell, a NIH-3T3 cell, a LM(tk-) cell, a mouse Y1 cell or a CHO cell.

The method of (17) comprises:

(a) contacting cells transfected with and expressing DNA encoding the mammalian SNORF44 receptor with a compound known to bind specifically to the mammalian SNORF44 receptor, or preparing a cell extract from cells transfected with and expressing DNA encoding the mammalian SNORF44 receptor isolating a membrane fraction from the cell extract, contacting the membrane fraction with a compound known to bind specifically to the mammalian SNORF44 receptor;

(b) contacting the preparation of step (a) with the plurality of compounds not known to bind specifically to the mammalian fb4la receptor, under conditions permitting binding of compounds known to bind the mammalian SNORF44 receptor;

(c) determining whether the binding of the compound known to bind to the mammalian SNORF44 receptor is reduced in the presence of the compounds within the number of compounds, relative to the binding of the compound in the absence of the number of compounds; and

(d) separately determining the binding to the mammalian SNORF44 receptor of compounds included in the number of compounds, thereby identifying the compound which specifically binds to the mammalian SNORF44 receptor.

The method of (18) comprises obtaining total mRNA from the cell and contacting the mRNA so obtained with the nucleic acid probe of (7) under hybridizing conditions, detecting the presence of mRNA hybridizing to the probe, and detecting the expression of the mammalian SNORF44 receptor by the cell.

The method of (19) comprises contacting the cell with the antibody of (1) under conditions permitting binding of the antibody to the receptor, detecting the presence of the antibody bound to the cell, and detecting the presence of the mammalian SNORF44 receptor on the surface of the cell.

The method of (20) comprises producing a transgenic nonhuman mammal of (13) whose levels of mammalian fb4la receptor activity are varied by use of an inducible promoter which regulates mammalian SNORF44 receptor expression, or producing a panel of transgenic nonhuman mammals each expressing a different amount of mammalian SNORF44 receptor.

The method of (21) comprises administering a compound to the transgenic nonhuman mammal of (13), and determining whether the compound alleviates

the physical and behavioral abnormalities displayed by the transgenic nonhuman mammal as a result of over activity of a mammalian SNORF44 receptor, the alleviation of the abnormality identifying the compound as an antagonist.
The method of (29) comprises:
(a) obtaining DNA of subjects suffering from the disorder;
(b) performing a restriction digest of the DNA, with a panel of restriction enzymes;
(c) electrophoretically separating the resulting DNA fragments on a sizing gel;
(d) contacting the resulting gel with a nucleic acid probe capable of specifically hybridizing with a unique sequence included within the sequence of a nucleic acid molecule encoding a mammalian SNORF44 receptor and labeled with a detectable marker;
(e) detecting labeled bands which have hybridized to the DNA encoding a mammalian SNORF44 receptor labeled with a detectable marker to create a unique band pattern specific to the DNA of subjects suffering from the disorder;
(f) preparing DNA obtained for diagnosis by steps (a)-(e); and
(g) comparing the unique band pattern specific to the DNA of subjects suffering from the disorder from step (e) and the DNA obtained for diagnosis from step (f) to determine whether the patterns are the same or different and to diagnose predisposition to the disorder if the patterns are the same.
The method of (30) comprises inducing cells to express the mammalian SNORF44 receptor, recovering the mammalian SNORF44 receptor from the induced cells, and purifying the mammalian SNORF44 receptor recovered, or inserting nucleic acid encoding the mammalian SNORF44 receptor in a suitable vector, introducing the resulting vector in a suitable host cell, placing the resulting cell in suitable condition permitting the production of the isolated mammalian SNORF44 receptor, recovering the mammalian SNORF44 receptor produced by the resulting cell, and purifying the mammalian SNORF44 receptor recovered.
The method of (36) comprises:
(a) contacting cells transfected with and expressing the mammalian SNORF44 receptor with the number of compounds not known to activate the mammalian SNORF44 receptor or a known mammalian SNORF44 receptor agonist, under conditions permitting activation of the mammalian SNORF44 receptor;
(b) determining whether the activity of the mammalian SNORF44 receptor is increased or reduced in the presence of the compounds; and
(c) separately determining whether the activation or inhibition of the mammalian SNORF44 receptor is increased or decreased by each compound included in the number of compounds, thereby identifying the compound which activates the mammalian SNORF44 receptor.

L13 ANSWER 2 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2003-598359 [56] WPIDS
DNN N2003-476732 DNC C2003-162419
TI Identifying agent that modulates GPR43 function, useful for treating migraine, schizophrenia, anxiety, by measuring binding of GPR43 polypeptide to short chain fatty acid in presence and absence of candidate modulator.
DC B04 D16 S03
IN BREZILLON, S; DETHEUX, M; LANNOY, V; LEPOUL, E; PARMENTIER, M; LE POUL, E
PA (BREZ-I) BREZILLON S; (DETH-I) DETHEUX M; (LANN-I) LANNOY V; (LEPO-I) LEPOUL E; (PARM-I) PARMENTIER M; (EURO-N) EUROSCREEN SA
CYC 102
PI WO 2003057730 A1 20030717 (200356)* EN 136p
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
US 2003175775 A1 20030918 (200362)
ADT WO 2003057730 A1 WO 2003-EP42 20030106; US 2003175775 A1 Provisional US

2002-346396P 20020107, US 2003-337992 20030107
PRAI US 2002-346396P 20020107; US 2003-337992 20030107
AB WO2003057730 A UPAB: 20030903
NOVELTY - Identifying agent that modulates function of GPR43, by measuring binding of GPR43 polypeptide (I) to short chain fatty acid (II) in presence and absence of candidate modulator (III); measuring signaling activity of (I) contacted with (II) in presence and absence of (III); or measuring signaling activity of (I) in presence of (II) and comparing the activity to activity measured in a sample in which (I) is contacted with (II) at its EC50.

DETAILED DESCRIPTION - Identifying agent that modulates function of **G-protein** coupled orphan receptor (GPR43) involves (M1-M3):

(a) contacting a GPR43 polypeptide (I) with a short chain fatty acid (II) in the presence and absence of candidate modulator (III) under conditions permitting binding of (II) to (I), and measuring binding of (I) to (II), where a decrease in binding in the presence of (III), relative to binding in the absence of (III), identifies (III) as an agent that modulates the function of GPR43;

(b) contacting (I) with (II) in the presence and absence of (III), and measuring a signaling activity of (I), where a change in the activity in the presence of (III) relative to the activity in the absence of (III) identifies (III) as an agent that modulates the function of GPR43; or

(c) contacting (I) with (III), measuring a signaling activity of (I) in the presence of (III), and comparing the activity measured in the presence of (III) to the activity measured in a sample in which (I) is contacted with (II) at its EC50, where (III) is identified as an agent that modulates the function of GPR43 when the amount of the activity measured in the presence of (III) is at least 20% of the amount induced by (II) present at its EC50.

INDEPENDENT CLAIMS are included for the following:

(1) detecting in a sample, the presence of an agent that modulates the function of GPR43, involves (M4)-(M6):

(a) contacting (I) with (II) in the presence and absence of the sample under conditions permitting binding of (II) to (I), and measuring binding of (I) to (II), where a decrease in binding in the presence of the sample, relative to binding in the absence of the sample, indicates the presence, in the sample of an agent that modulates the function of GPR43;

(b) contacting (I) with (II) in the presence and absence of the sample, measuring a signaling activity of (I), and comparing the amount of the activity measured in a reaction containing GPR43 and (II) without the sample to amount of the activity measured in a reaction containing GPR43, (II) and sample, where a change in the activity in the presence of the sample relative to the activity in the absence of the sample indicates the presence, in the sample, of an agent that modulates the function of GPR43; or

(c) contacting (I) with the sample, measuring a signaling activity of (I) in the presence of the sample, and comparing the activity measured in the presence of the sample to the activity measured in a sample in which (I) is contacted with (II) at its EC50, where an agent that modulates the function of GPR43 is detected if the amount of the activity measured in the presence of the sample is at least 20% of the amount induced by (II) present at its EC50;

(2) diagnosing (M7) a disease or disorder characterized by dysregulation of GPR43 signaling;

(3) detecting (M8) the presence of a disease characterized by the dysregulation of GPR43;

(4) a composition comprising an isolated (I) and an isolated (II) or its salt;

(5) a kit comprising an isolated (I) and an isolated (II) or its salt;

(6) a kit comprising an isolated (II) or its salt and a cell membrane fraction comprising (I);

(7) a kit for screening for agents that modulate the activity of GPR43, comprising an isolated polynucleotide encoding (I) and an isolated salt of (II);

(8) a kit for screening for agents that modulate the activity of

GPR43, comprising an isolated salt of (II) and a cell transformed with a polynucleotide encoding (I);

(9) a kit for diagnosis of a disease or disorder characterized by dysregulation of GPR43 signaling, comprising an isolated polynucleotide encoding (I), a standard and packaging material, or a cellular membrane fraction comprising (I), a standard and its packaging materials, or a cell transformed with a polynucleotide encoding (I), a standard and packaging material;

(10) an agent (IV) which modulates GPR43 activity identified by (M1)-(M6);

(11) an agent (V) which modulates PMN chemotaxis identified by (M1)-(M6);

(12) a pharmaceutical composition (VI) comprising a (IV) or (V);

(13) use of (II) for the modulation of GPR43 activity or PMN chemotaxis in vivo and/or in vitro; and

(14) use of (II) for modulating PMN chemotaxis in vivo or in vitro, in the validation of a non-human mammal comprising a partial or total deletion of the polynucleotide encoding GPR43 or in the validation of a non-human mammal overexpressing the polynucleotide encoding GPR43.

ACTIVITY - Antiemetic; Antimigraine; Neuroleptic; **Antidepressant**; Tranquilizer; Neuroprotective; Nootropic; Antiparkinsonian; Anticonvulsant; Antimanic; Analgesic; Cytostatic; Metabolic; Immunomodulator; Antiasthmatic; Cardiant; Hypotensive; Osteopathic; Antianginal; Antiulcer; Antiallergic; Cerebroprotective. No supporting data is given.

MECHANISM OF ACTION - GPR43 activity modulator; GPR43 signaling activity modulator; Modulator of chemotaxis of polmorphonuclear cell.

USE - (IV) is useful for modulating the activity of (I) in a cell. (V) is useful for modulating PMN chemotaxis in a mammal. (IV) or (V) or (VI) is useful for manufacture of medicament for treating GPR43-related diseases or PMN chemotaxis-related diseases or kit for modulating GPR43 activity or PMN chemotaxis, respectively. (M1)-(M6) is useful for identifying an agent which modulates PMN chemotaxis (claimed). (IV) is useful for treating diseases or disorder such as vomiting, migraine, schizophrenia, manic depression, anxiety, dementia, neurodegenerative diseases such as Alzheimer's disease and Parkinson's diseases and dyskinesias, such as Huntington's disease. (IV) is also useful for preventing, improving or correcting dysfunction or diseases e.g., pain, cancer, anorexia, bulimia, asthma, acute heart failure, hypertension, urinary retention, osteoporosis, angina pectoris, myocardial infarction, ulcers, allergies, stroke, and schizophrenia.

Dwg.0/17

TECH UPTX: 20030903

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: In (M1)-(M6), (II) is detectably labeled with a moiety chosen from radioisotope, fluorophore, quencher of fluorescence, enzyme, and an affinity tag. The contacting is performed in or on a cell expressing (I). The contacting is optionally performed in or on synthetic liposomes, or is performed in or on virus-induced budding membranes containing (I). The methods are performed using membrane fractions from cells expressing (I). In (M1) or (M4), the measuring is performed by label displacement, surface plasmon resonance, fluorescence resonance energy transfer, fluorescence quenching or fluorescence polarization. The agent is chosen from peptide, polypeptide, antibody or its antigen-binding fragment, lipid, carbohydrate, nucleic acid, and a small organic molecule. In (M2), (M3), (M5) or (M6), the measuring is carried out by detecting a change in the level of a second messenger, and measuring signaling activity involves measurement of guanine nucleotide binding or exchange, **adenylate cyclase** activity, cAMP, protein kinase C activity, phosphatidylinosotol breakdown, diacylglycerol, inositol triphosphate, intracellular calcium, arachinoid acid, mitogen activated protein (MAP) kinase activity, tyrosine kinase activity, or reporter gene expression. Preferably, measuring signaling activity involves using an aequorin-based assay. (M7) involves diagnosing a disease or disorder characterized by dysregulation of GPR43 signaling, involves isolating nucleic acid from a tissue sample, amplifying a GPR43 polynucleotide, using the nucleic acid as a template, and comparing the amount of amplified GPR43 polynucleotide

with a standard, where a difference in the amount of amplified GPR43 polynucleotide relative to the standard is diagnostic of a disease or disorder characterized by dysregulation of GPR43. The method optionally involves isolating nucleic acid from a tissue sample, amplifying a GPR43 polynucleotide, using the nucleic acid as a template, and comparing the sequence of the amplified GPR43 polynucleotide with a standard, where a difference in the sequence, relative to the standard is diagnostic of a disease or disorder characterized by dysregulation of GPR43. (M8) comprises detecting the presence of a disease characterized by the dysregulation of GPR43 involves contacting tissue sample with an antibody specific for GPR43, detecting binding of antibody to the tissue sample and comparing the binding detected with a standard, where a difference in binding relative to the standard is indicative of presence of the disease; or contacting (I) present in the membrane of polymorphonuclear cell with (II), measuring binding of (I) to (II), and comparing the binding detected with a standard, where a difference in binding relative to the standard is indicative of presence of the disease; or contacting (I) present in the membrane of polymorphonuclear cell (PMN) cell with (II), measuring signaling activity of GPR43 polypeptide and comparing the signaling activity with a standard, where a difference in binding relative to the standard is indicative of the presence of the disease.

L13 ANSWER 3 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2003-256622 [25] WPIDS
DNN N2003-203508 DNC C2003-066659
TI Screening for modulator of G **protein** coupled receptor, GPR86 activity, by incubating cells expressing GPR86 with candidate modulator and detecting signaling activity of the polypeptide.
DC B04 D16 S03
IN BOEYNAEMS, J; BREZILLION, S; COMMUNI, D; DETHEUX, M; LANNOY, V; PARMENTIER, M; SUAREZ, N; BREZILLON, S
PA (BOEY-I) BOEYNAEMS J; (BREZ-I) BREZILLION S; (COMM-I) COMMUNI D; (DETH-I) DETHEUX M; (LANN-I) LANNOY V; (PARM-I) PARMENTIER M; (SUAR-I) SUAREZ N; (EURO-N) EUROSCREEN SA
CYC 22
PI WO 2003014731 A2 20030220 (200325)* EN 103p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
W: CA JP
US 2003050235 A1 20030313 (200326)
ADT WO 2003014731 A2 WO 2002-EP8761 20020806; US 2003050235 A1 US 2001-924125 20010807
PRAI US 2001-924125 20010807
AB WO2003014731 A UPAB: 20030416
NOVELTY - Screening (M1) for a modulator of G **protein** coupled receptor GPR86 activity using cells (or cell membranes) expressing GPR86, comprises incubating two samples of the cells in the presence and absence of the candidate modulator, both the samples being under conditions, which permit binding of ADP to GPR86, detecting a signaling activity of GPR86 polypeptide in the samples, and comparing results of second messenger assays for the samples.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) detecting (M2) GPR86 activity in a sample, by incubating a sample comprising GPR86 and ADP under conditions which permit binding of GPR68 and ADP, and detecting a second messenger;

(2) detecting (M3) the presence, in a sample, of an agent that modulates the function of GPR86, by contacting a GPR86 polypeptide with the sample, measuring a signaling activity of the GPR86 polypeptide in the presence of the sample, and comparing the activity measured in the presence of the sample to the activity measured in a reaction in which the GPR86 polypeptide is contacted with a ADP present at its EC50, where an agent that modulates the function of GPR86 is detected if the amount of the activity measured in the presence of sample is at least 50% of the amount induced by ADP present at its EC50;

(3) identifying (M4) an agent that modulates the function of GPR86, by contacting a GPR86 polypeptide with ADP in the presence and absence of a candidate modulator under conditions permitting the binding of the ADP

to GPR86 polypeptide, and measuring the binding of GPR86 polypeptide to the candidate modulator, relative to the binding in the absence of the candidate modulator, identifies the candidate modulator as an agent that modulates the function of GPR86;

(4) modulating the GPR86 activity of a polypeptide in a cell, by delivering to the cell an agent that modulates the GPR86 activity of a polypeptide;

(5) a non-human mammal (I) comprising a partial or total deletion of the ortholog sequence of the human GPR86 polynucleotide (having a sequence of 1002 bp defined in the specification), such as a non-human mammal comprising a homologous recombinant knockout of the polynucleotide or a transgenic non-human mammal overexpressing above natural level of the polynucleotide;

(6) an antibody (II) specific for GPR86 polypeptide;

(7) diagnosing (M5) a disease or disorder characterized by dysregulation of GPR86 signaling, by: (a) contacting a tissue sample with the antibody specific for GPR86 specific ligand and/or antibody specific for GPR86 polypeptide, detecting binding of the antibody to the tissue sample, and comparing the binding with a standard, where a difference in binding relative to the standard is diagnostic of the disease or disorder; (b) isolating nucleic acid from a tissue sample, amplifying a GPR86 polynucleotide or GPR86-specific ligand polynucleotide using the nucleic acid as a template, and comparing the amount of amplified GPR86 polynucleotide or the sequence of the amplified GPR86-specific ligand polynucleotide with a standard, where a difference in the amount of amplified GPR86 polynucleotide or the sequence relative to the standard is diagnostic of the disease or disorder;

(8) a kit for detecting binding to GPR86 or a modulator of GPR86, comprising GPR86 and ADP, and packaging materials, where the GPR86 and ADP are packaged separately;

(9) a kit for screening for agents that modulate the signaling activity of GPR86, comprising an isolated polynucleotide encoding a GPR86 polypeptide, or a cell transformed with a polynucleotide encoding GPR86 polypeptide, and an unit for detecting GPR86 signaling, and its packaging materials;

(10) a kit for diagnosis of a disease or disorder characterized by dysregulation of GPR86 signaling, comprising an isolated GPR86 polypeptide and unit for detecting GPR86 signaling, and its packaging materials;

(11) a candidate modulator (III) of GPR86 activity, which is obtainable by (M1), (M3) or (M4); and

(12) a pharmaceutical composition comprising (II) or (III).

ACTIVITY - Antimigraine; Antiemetic; Neuroleptic; Tranquilizer; **Antidepressant**; Nootropic; Neuroprotective; Antiparkinsonian; Anticonvulsant; Anticoagulant; Thrombolytic; Cardiant; Immunosuppressive; Antiinflammatory; Antiinfertility; Antibacterial; Fungicide; Protozoacide; Virucide; Anti-HIV; Analgesic; Cytostatic; Metabolic; Antiasthmatic; Cardiant; Hypotensive; Osteoporosis; Antianginal; Antiulcer; Antiallergic; Cerebroprotective. No biological data is given.

MECHANISM OF ACTION - None given.

USE - (M1) is useful for screening a modulator of GPR86 activity, and for determining if a candidate modulator increases or decreases the activity of GPR86. The agent or the candidate modulator is a natural or synthetic peptide, polypeptide, an antibody or its antigen-binding fragment, lipid, carbohydrate, nucleic acid or small organic molecule. (M2) is useful for detecting GPR86 activity in a sample. (M3) is useful for detecting the presence, in a sample, of an agent that modulates the function of GPR86. (II) is useful for diagnosing a disease or disorder characterized by dysregulation of GPR86 signaling. (II) and (III) are useful for the manufacture of a pharmaceutical composition for preventing, treating and/or alleviating diseases or disorders characterized by dysregulation of GPR86 signaling such as ostatic hypertrophy, migraine, vomiting, psychotic and neurological disorders, including anxiety, depression, schizophrenia, manic depression, delirium, dementia, severe mental retardation, degenerative diseases, neurodegenerative diseases such as Alzheimer's disease or Parkinson's disease, dyskinesias such as Huntington's disease or Gilles de la Tourette's syndrome and other related diseases including thrombosis and other cardiovascular disease, autoimmune

and inflammatory diseases, inflammatory diseases, fertility dysfunctions, fetal developmental disorders, infections such as bacterial, fungal, protozoan and viral infections such as infections caused by HIV-1 and HIV-2, pain, cancer, anorexia, bulimia, asthma, acute heart failure, hypertension, urinary retention, osteoporosis, angina pectoris, myocardial infarction, ulcers, allergies, benign prostatic hypertrophy and stroke (all claimed). (I) is also useful as a tool for genetic and developmental biology studies and for the determination of the function of a novel sequence.
Dwg.0/10

TECH UPTX: 20030410
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: (M2) further comprises incubating a second sample comprising GPR86 in the absence of ADP under conditions which permit binding of GPR86 and ADP, and detecting a second messenger. The sample comprises cells expressing GPR86, or cell membranes bearing GPR86. Incubation is performed in or on virus-induced budding membranes containing a GPR86 polypeptide. The method is performed in the presence of Galpha16 polypeptide. The cells are COS7-cells, Chinese Hamster ovary (CHO) cells, LM (TK-) cell, NIH-3T3 cell, HEK-293 cell, K562 or 1321N1 astrocytoma cell and other cell lines. (M1), (M3) and (M4) are further performed in the presence of Galpha16 polypeptide. The measuring or detecting is performed using label displacement, surface plasmon resonance, fluorescence resonance energy transfer, fluorescence quenching, or fluorescence polarization. The detection or measurement of signaling activity of GPR86 polypeptide comprises detecting a change in the level of a second messenger, or measurement of guanine nucleotide binding or exchange, **adenylate cyclase** activity, cAMP, protein kinase C activity, phosphatidylinositol breakdown, diacylglycerol, inositol triphosphate, intracellular calcium, arachinoid acid concentration, mitogen activated protein kinase (MAPK) activity, tyrosine kinase activity or reporter gene expression. The signaling activity is measured by an aequorin-based assay. In (M5), comparing is performed on a microarray, and the standard comprises the nucleotide sequence of GPR86 polynucleotide.
Preferred Modulator: (III) is ATP, 2MeSATP, 2MeSADP, ADPbetaS, Ap3A, RB-2, Suramine or PPADS.

L13 ANSWER 4 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2003-110149 [10] WPIDS
DNN N2003-087540 DNC C2003-028157
TI Determining effects of candidate agent on activation of a G protein coupled receptor (GPCR) for evaluating new agonists and/or inverse agonists for GPCRs by contacting a candidate agent with a modified G protein alpha subunit and a GPCR.
DC B04 D16 S03
IN KOBILKA, B; LEE, T W
PA (STRD) UNIV LELAND STANFORD JUNIOR
CYC 1
PI US 6448377 B1 20020910 (200310)* 38p
ADT US 6448377 B1 US 2000-672239 20000927
PRAI US 2000-672239 20000927
AB US 6448377 B UPAB: 20030211
NOVELTY - Determining the effects of a candidate agent on activation of a G protein coupled receptor (GPCR) comprises contacting a candidate agent with a modified G protein alpha subunit and a GPCR, and detecting a level of G protein activation in response to the contacting, where the level of activation is indicative of the effects of the agent on the activity of GPCR.

DETAILED DESCRIPTION - Determining the effects of a candidate agent on activation of a G protein coupled receptor (GPCR) comprises contacting a candidate agent with a modified G protein alpha subunit and a GPCR, which are localized to a membrane, where the modified G protein alpha subunit comprises a membrane tether and a G protein alpha subunit that is not a fusion protein with the GPCR, and detecting a level of G protein activation in response to the contacting, where the level of activation is indicative of the effects of the agent on the activity of GPCR.

USE - The method is useful for determining the effects of a candidate

agent on activation of a G protein coupled receptor (claimed), evaluating new agonists, and/or inverse agonists for GPCRs, identifying ligands for GPCRs, and developing a strategy for identifying GPCRs involved in different biological processes, including diseases.

ADVANTAGE - The invention provides rapid and more sensitive bioassays for evaluating new agonists, agonists and/or inverse agonist for GPCRs. The method can be performed using membranes, which increases both the ease of performing the assay and its efficacy, and also allows high throughput screening of GPCR activity. Furthermore, this method directly measures GPCR activity, and thus is less labor-intensive than the conventional methods.

Dwg.0/37

TECH UPTX: 20030211

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: In determining the effects of a candidate agent on activation of a GPCR, the modified G protein alpha subunit comprises a constitutive localization to the membrane, an enhanced binding to a receptor binding partner and an efficient binding to a downstream effector of a G protein signaling. The modified G protein activation is detected by a level of GTPase activity. This subunit is **Gsalpha**, where the G protein activation is detected by detecting a level of **adenylyl cyclase** and the GPCR displays spontaneous activity. The G protein activation is also detected by detecting a level of a fluorescent GTP analog binding to the modified G protein alpha subunit. This method further comprises measuring a level of G protein activation prior to contacting, and comparing the level of G protein activation prior to contacting with the level of G protein activation in response to the candidate agent. Furthermore, the level of G protein activation is compared in response to the candidate agent with a standard, indicative of a level of basal G protein activation for the GPCR. An increase in the level of GPCR activity in response to the compound indicates that the candidate agent is an agonist of the GPCR, while a decrease in level of G protein activation in response to the candidate agent indicates that the candidate agent as an inverse agonist of the GPCR. In addition, this method comprises contacting the modified G protein alpha subunit and GPCR with an agonist of the GPCR, where a decrease in the level of G protein activation in response to the candidate agent in the presence of the agonist indicates that the candidate agent is an antagonist of the GPCR. The membrane is a plasma membrane of whole cells co-expressing, and is provided as a membrane preparation comprising, the modified G protein alpha subunit and the GPCR. The modified G protein alpha subunit further comprises a heterologous epitope domain and a protease cleavage site positioned between the tether and the G protein alpha subunit. As an alternative to the contacting step cited above, the method comprises contacting a modified G protein alpha subunit and a GPCR, which are separate proteins localized to a membrane, where the modified G protein alpha subunit comprises, from N- to C- terminus, a membrane tether and a G protein alpha subunit, in which the G protein alpha subunits is not a fusion protein with the GPCR.

L13 ANSWER 5 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-188784 [24] WPIDS
DNN N2002-143087 DNC C2002-058437
TI Detecting **effectiveness** of **antidepressant therapy** in a depressed individual, comprises analyzing association of **Gs-alpha** with components of plasma membrane or cytoskeleton of cells from peripheral tissues of the individual.
DC B04 D16 S03
IN DONATI, R J; RASENICK, M M; TOKI, S
PA (DONA-I) DONATI R J; (RASE-I) RASENICK M M; (TOKI-I) TOKI S; (UNII) UNIV ILLINOIS
CYC 96
PI WO 2002010763 A2 20020207 (200224)* EN 38p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU

SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2002039752 A1 20020404 (200227)
AU 2001077222 A 20020213 (200238)
ADT WO 2002010763 A2 WO 2001-US23851 20010730; US 2002039752 A1 Provisional US 2000-221874P 20000729, US 2001-918230 20010730; AU 2001077222 A AU 2001-77222 20010730
FDT AU 2001077222 A Based on WO 2002010763
PRAI US 2000-221874P 20000729; US 2001-918230 20010730
AB WO 200210763 A UPAB: 20020416
NOVELTY - Detecting (M1) the **effectiveness** of **antidepressant therapy** in a depressed individual, involves determining whether there has been a modification of the association of **Gs alpha** with components of the plasma membrane or cytoskeleton of cells from peripheral tissues of the depressed individual.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for assaying (M2) for an agent or agents having **antidepressant** activity or having the ability to modify the association of **Gs alpha** with components of the plasma membrane or cytoskeleton of cells comprising:
(a) contacting the agent or agents with cultured cells expressing type VI **adenylyl cyclase**;
(b) determining whether there has been a modification of the association of **Gs alpha** with components of the plasma membrane or cytoskeleton of the cells by comparison to a control cell culture lacking the agent or agents; and
(c) identifying agents having **antidepressant** activity from a difference in the modification of the association of **Gs alpha** with components of the plasma membrane or cytoskeleton of the cells, where an agent or agents having **antidepressant** activity increases the modification of the association of **Gs alpha** with components of the plasma membrane or cytoskeleton of the cells.
ACTIVITY - **Antidepressant**. No suitable biological data is given.
MECHANISM OF ACTION - **Gs alpha -adenylyl cyclase** coupling enhancer.
USE - M1 is useful for detecting the **effectiveness** of **antidepressant therapy** in a depressed individual. Another new method (M2) is useful for assaying for an agent or agents having **antidepressant** activity (claimed).
Dwg.0/10
TECH UPTX: 20020416
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: M1 comprises collecting cells from peripheral tissues from the depressed individual, prior to determining whether there has been a modification of the association of **Gsalpha** with components of the plasma membrane or cytoskeleton of the cells collected. In M1, the modification is enhanced coupling between **Gsalpha** and **adenylyl cyclase**, a redistribution of **Gsalpha** from a strongly hydrophobic region of the plasma membrane to a less hydrophobic membrane domain or a redistribution of **Gsalpha** from cell processes and process tips to the cell body. The peripheral tissues are blood cells such as erythrocytes, leukocytes or platelets, or skin fibroblasts. In M2, the cultured cells are of neural or glial origin. The cultured epithelial cells express Type VI **adenylyl cyclase**.

L13 ANSWER 6 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-188470 [24] WPIDS
DNC C2002-058228
TI Identifying psychiatric disorder (PD)-associated genes by determining whether gene with altered expression as represented by test cRNA on hybridization to nucleic acids in microarray, maps to PD linkage region.
DC B04 D16
IN BARRETT, T B; KELSOE, J R; NICULESCU, A B
PA (REGC) UNIV CALIFORNIA
CYC 96

PI WO 2002004677 A2 20020117 (200224)* EN 73p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001071887 A 20020121 (200234)
ADT WO 2002004677 A2 WO 2001-US21453 20010706; AU 2001071887 A AU 2001-71887 20010706
FDT AU 2001071887 A Based on WO 2002004677
PRAI US 2000-216263P 20000706
AB WO 200204677 A UPAB: 20020416
NOVELTY - Identifying genes associated with psychiatric disorders (PD) by:
(1) hybridizing test, control antisense cRNAs (TR,CR) to microarray with 2 nucleic acids (NA);
(2) measuring hybridization of TR,CR to NA;
(3) comparing hybridizations of TR,CR to provide hybridization score (HS);
(4) determining whether HS indicates TR representing gene with altered expression; and
(5) determining whether gene maps to PD linkage region.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) diagnosing (M1) bipolar disorder by detecting sequence variation in at least one fragment of a **G protein**-coupled receptor kinase 3 (GRK3) gene obtained from a subject; and
(2) screening (M2) compounds that alter expression of at least one psychiatric gene involves:
(a) providing several cells comprising psychiatric genes, standard medium, medium containing at least one dopamine agonist, and at least one test compound;
(b) incubating a first aliquot of the cells with the standard medium and at least one test compound;
(c) incubating a second aliquot of the cells with the medium containing at least one dopamine agonist and at least one test compound;
(d) quantitating the expression of the psychiatric genes in the first and second aliquot; and
(e) comparing the expression of the psychiatric genes in the first and second aliquots.
ACTIVITY - Antimanic; antidepressant; neuroleptic; tranquilizer; antiparkinsonian; antialcoholic.
No supporting data is given.
MECHANISM OF ACTION - Expression of psychiatric genes modulator.
USE - Identifying genes associated with psychiatric disorders such as a bipolar disorder, manic-depressive illness, unipolar depression, major depression, schizophrenia, schizoaffective disorder or attention deficit disorder. (M1) is useful for diagnosing a bipolar disorder in a subject who is at risk of developing the disorder (all claimed). The compounds identified using (M2) have therapeutic value for treating psychiatric disorders such as a bipolar disorder, schizophrenia, schizoaffective disorder, psychosis, depression, stimulant abuse, alcoholism, panic disorder, generalized anxiety disorder, attention deficit disorder, post traumatic stress disorder or Parkinson's disease.
Dwg.0/4
TECH UPTX: 20020416
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: The gene which is identified is a human homologue, and maps to within about 10 centimorgans (cM) of a putative **marker** associated with psychiatric disorder that has been identified as such in human genetic studies. The HS indicates TR representing a gene with altered expression e.g., induced genes or repressed genes. The microarray employed in the method preferably comprises at least one gene chip, and preferably, the hybridized TR and CR are labeled with fluorescent label, luminescent label, enzyme label, or radioactive label. The TR employed in the method is obtained from an animal treated with a dopamine agonist and CR is obtained from an animal not treated with dopamine agonist such as amphetamine, methamphetamine,

cocaine or methylphenidate.
In (M1), variation in at least one fragment of GRK3 gene is detected by nucleotide sequencing. Preferably, the variation is detected in the promoter region of the GRK3 gene. The sequence variation that is detected in GRK3 gene is:
(a) thymine to cytosine transition;
(b) adenine to guanine transition;
(c) thymine to guanine transversion;
(d) adenine to guanine transition;
(e) guanine to adenine transition; or
(f) guanine deletion at approximately 1330, 1306, 1197, 901, 383, or 110 base pairs, respectively upstream of the translation start site of the GRK3 gene.
This sequence variation is predictive of a subject's response (hypomania, mania or psychosis) to an **antidepressant**. In (M2), quantitating the expression of the psychiatric genes (psychogenes or psychosis-suppressor genes) is carried out by Northern blot, reverse transcriptase (RT)-PCR, Western blot, enzyme-linked immunosorbent assay, fluorescence immunoassay, radioimmunoassay, luciferase assay, fluorescence assay or flow cytometry. The psychiatric genes whose expression is quantitated are GRK3 gene, the D-box binding protein (DBP) gene, the farnesyl-diphosphate farnesyltransferase (FDFT1) gene, the vertebrate LIN7 homolog 1 (VELI1) gene, the sulfotransferase 1 A1 (SULT1A1) gene, or the insulin-like growth factor 1 (IFG1) gene.

L13 ANSWER 7 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-164357 [21] WPIDS
DNC C2002-050743
TI Identifying an agent useful for treating or preventing heart failure, e.g., congestive heart failure or myocardial infarction, comprises administering the agent and monitoring expression or activity of an uncoupling protein.
DC B04 D16
IN HOMCY, C J
PA (CORT-N) COR THERAPEUTICS INC
CYC 94
PI WO 2001096398 A2 20011220 (200221)* EN 30p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001068461 A 20011224 (200227)
ADT WO 2001096398 A2 WO 2001-US19230 20010615; AU 2001068461 A AU 2001-68461 20010615
FDT AU 2001068461 A Based on WO 2001096398
PRAI US 2000-211536P 20000615
AB WO 200196398 A UPAB: 20020403
NOVELTY - Identifying an agent for treating heart failure comprising administering the agent and monitoring the expression or activity of an uncoupling protein (UCP), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a method of treating heart failure comprising administering an agent that modulates UCP expression or activity; and
(2) a method of diagnosing heart failure by detecting the expression level of UCP.
ACTIVITY - Cardiant.
No supporting data provided.
MECHANISM OF ACTION - None given.
USE - The agents identified by the method are useful for treating, preventing and diagnosing heart failure, such as congestive heart failure, ischemic heart disease,cardiomyopathy (claimed),myocardial infarction, tachyarrhythmia, familial hypertrophic cardiomyopathy and myocarditis.
Dwg.0/0
TECH UPTX: 20020403

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Agent: The agent is administered to in vitro cells, where the cells are H9C2 cells, hepatocytes, neonatal cardiomyocytes, or host cells engineered to express a UCP. The agent may also be administered to a **GSalpha** transgenic animal. The agent is an inhibitor or an inducer of UCP expression or activity, where the inhibitor is selected from purine nucleotide, UCP antibody and antisense molecule of UCP, while the inducer is a fatty acid or a fatty acid-activated transcription factor. The agent modulates the concentration of cAMP and is selected from phosphodiesterase inhibitors, forskolin, and inhibitors and stimulators of **adenylate cyclase**. The expression or activity of a UCP selected from UCP-1, UCP-2 and UCP-3, is monitored.
The agent that modulates UCP activity or expression can be administered to treat heart failure such as congestive heart failure, cardiomyopathy and ischemic heart disease. The expression level of UCP is detected using a UCP nucleic acid probe or an antibody against a UCP.

L13 ANSWER 8 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-154968 [20] WPIDS
DNN N2002-117782 DNC C2002-048538
TI Identifying substances for use as P2Y receptor agonists or antagonists, comprises contacting the receptor with a test substance in a cell-free system and measuring the interaction or effect of the substance on a sample.
DC B04 D16 S03
IN BLAESIUS, R; HARDEN, T K; NICHOLAS, R; WALDO, G L
PA (UYNC-N) UNIV NORTH CAROLINA; (BLAE-I) BLAESIUS R; (HARD-I) HARDEN T K; (NICH-I) NICHOLAS R; (WALD-I) WALDO G L
CYC 96
PI WO 2002004955 A2 20020117 (200220)* EN 50p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001073243 A 20020121 (200234)
EP 1301792 A2 20030416 (200328) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
US 2003175810 A1 20030918 (200362)
ADT WO 2002004955 A2 WO 2001-US21467 20010706; AU 2001073243 A AU 2001-73243 20010706; EP 1301792 A2 EP 2001-952501 20010706, WO 2001-US21467 20010706; US 2003175810 A1 Provisional US 2000-216618P 20000707, Cont of WO 2001-US21467 20010706, US 2003-336608 20030103
FDT AU 2001073243 A Based on WO 2002004955; EP 1301792 A2 Based on WO 2002004955
PRAI US 2000-216618P 20000707; US 2003-336608 20030103
AB WO 200204955 A UPAB: 20020402
NOVELTY - Screening (M1) candidate substances (CS) for an ability to modulate P2Y receptor-promoted biological activity, by:
(a) contacting a test sample comprising a pure P2Y receptor, with candidate substances; and
(b) measuring an interaction, effect or their combination, of the substances on test sample, to determine ability of the substance to modulate P2Y receptor-promoted biological activity.
DETAILED DESCRIPTION - Screening (M1) candidate substances (CS) for an ability to modulate P2Y receptor-promoted biological activity, by:
(a) contacting a test sample comprising a pure P2Y receptor, with candidate substances; and
(b) measuring an interaction, effect or their combination, of the substances on test sample, to determine ability of the substance to modulate P2Y receptor-promoted biological activity.
In an alternative method, M1 comprises:
(a) establishing replicate test and control samples that comprise a pure biologically active P2Y receptor (G protein coupled receptor for extracellular nucleotides that have been shown to be functional receptors)

polypeptide, administering a candidate substance to the test sample but not the control sample, measuring the activity of P2Y receptor-promoted biological activity in the test and control samples, and determining that the candidate substance modulates P2Y receptor-promoted biological activity if a level of P2Y receptor-promoted activity measured for the test sample is greater or less than the level of P2Y receptor-promoted biological activity measured for the control sample; or

(b) establishing a control system comprising a ligand and a P2Y receptor capable of binding to the ligand, establishing a test system comprising a P2Y receptor, a ligand and a candidate compound, measuring binding affinity of a P2Y receptor and a ligand in the control and the test systems, and determining that the candidate compound modulates P2Y receptor-promoted activity in a cell-free system if the binding affinity measured for the test system is less than or greater than the binding affinity measured for the control system.

INDEPENDENT CLAIMS are also included for the following:

(1) a cell-free system for the study of P2Y receptors, comprising a P2Y receptor, a vesicle, and optionally a protein that normally interacts with the P2Y receptor in nature; and

(2) producing (M2) a cell-free system for the assay of P2Y receptor-promoted activity, by:

(a) purifying a P2Y receptor;

(b) purifying a protein that normally interacts with the P2Y receptor in nature;

(c) reconstituting the P2Y receptor into a vesicle; and

(d) optionally reconstituting the protein into the vesicle to produce the cell-free system.

USE - M1 is useful for screening candidate substances for the ability to modulate P2Y receptor-promoted biological activity including hydrolysis of NTP molecules to NDP molecules, formation of NTP molecules from NDP molecules, modulation of intracellular calcium levels, modulation of phospholipase C activity, modulation of **adenylate cyclase** activity, translocation of RhoA (a small GTP-binding protein that controls reorganization of the actin cytoskeleton and activates transcription factors in response to extracellular agonists) to membranes, formation of a network of stress fibers, phosphorylation of myosin light chains, cell differentiation modulation of NTPase activity, shape change in platelets and their combinations. M2 is useful for producing a cell-free system for the assay of P2Y receptor-promoted activity (claimed).

ADVANTAGE - The cell-free system eliminates contaminating protein and non-specific binding. The elimination of contaminants enhances the signal to noise ratio of the assay. Thus, due to low degree of background signal even weak binding events and low level activities can be accurately detected and quantified.

Dwg.0/5

TECH UPTX: 20020402

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: M1 is carried out in a cell-free system. A test or a control sample further comprises a vesicle comprising a P2Y receptor and a protein that normally interacts with a P2Y receptor in nature, or a ligand for P2Y receptor or the protein. The P2Y receptor is P2Y1, P2Y2, P2Y4, P2Y6, P2Y11 receptor or their combinations. The protein that normally interacts with a P2Y receptor in nature is a substantially pure G protein including, but not limited to Gqalpha, Gqbeta, Gqgamma, G11alpha, G(12/13)alpha, G(12/13)beta, G(12/13)gamma, Gialpha, Gibeta, Gigamma, **Gsalpha**, Gsbeta, Gsgamma, Galpha14, Galpha16, Gbetagamma dimers and their combinations. The ligand is NTP (ribonucleoside triphosphate), NDP (ribonucleoside diphosphate), RGS (regulator of G protein signaling) protein including RGS1, RGS2, RGS4 or RGS16, an agonist, antagonist or their combinations. The ligand, the P2Y receptor, the protein or their combination is detectably labeled with a radioactive group (3H, 32P, 35S, 14C or 125I), fluorescent group (such as near-infrared fluorescent dye, dinitrophenyl, fluorescein, its derivative, rhodamine, its derivative, phycoerythrin, phycocyanin, allophycocyanin, o-phthaldehyde, fluorescamine, Texas red, rhodamine green, oregon green, cascade blue, phycoerythrin, CY3, CY5, CY2, CY7, coumarin, infrared 40, MR200, IRD40 and green fluorescent protein), chemiluminescent group (e.g.

luminol, isoluminol, theromatic acridinium ester, imidazole, acridinium salt and oxalate ester, luciferin, luciferase or aequorin), or their combinations. The binding affinity is assessed by comparing an amount of bound labeled ligand to unbound labeled ligand. The bound and unbound labeled ligands are separated by contacting a test sample with a separation matrix comprising activated charcoal. A detectable signal is generated from resonant interaction between two energy emitting label groups. (I) is carried out in one or multiple wells of a multi-well plate, and the method further comprises screening several candidate substance simultaneously. In (M2), the P2Y receptor is expressed in an in vivo or in vitro expression system which further comprises a recombinant vector comprising a nucleic acid sequence encoding a P2Y receptor. The recombinant vector further comprises a sequence of genomic viral DNA, preferably baculoviral DNA showing affinity for a host cell and possessing the ability to infect the host cell, a nucleic acid sequence encoding a P2Y receptor operatively linked to the sequence of genomic viral DNA, where the P2Y receptor is expressed in the host cell following infection of the cell, and a selectable marker. (M2) further comprises transfecting a prokaryotic, eukaryotic, or an insect cell with the recombinant vector under conditions suitable for the expression of the P2Y receptor to produce a P2Y receptor. The P2Y receptor has a sequence of 6 histidine residues or comprises a FLAG (RTM) epitope (DTKDDDDK), at the C- or N-terminal end of the P2Y receptor protein. The P2Y receptor is purified by passing the receptor over a residue comprising nickel atoms, or by binding the receptor to a detectable anti-FLAG (RTM) antibody and isolating the complex. The proteins that normally interact with P2Y receptor in nature are also expressed in an in vivo or in vitro expression system.

L13 ANSWER 9 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-130822 [17] WPIDS
DNC C2002-040202
TI New **G protein**-coupled receptor (IGPc20) gene useful for drug screening, and diagnosing or treating diseases, e.g. cancer, reproductive disorders and infertility related to epididymal dysfunction or inflammations.
DC B04 D16
IN NEHLS, M C; TROMMLER, P; WATTLER, F; WATTLER, S
PA (INGE-N) INGENIUM PHARM AG
CYC 94
PI WO 2002000001 A2 20020103 (200217)* EN 75p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001087574 A 20020108 (200235)
ADT WO 2002000001 A2 WO 2001-EP7533 20010702; AU 2001087574 A AU 2001-87574 20010702
FDT AU 2001087574 A Based on WO 2002000001
PRAI US 2000-215777P 20000630
AB WO 200200001 A UPAB: 20020313
NOVELTY - An isolated human **G protein**-coupled receptor (IGPcR20) nucleic acid comprises:
(a) a sequence:
(i) of 1011 (I) or 987 base pairs (bp) (II), given in the specification; or
(ii) encoding a polypeptide of 336 (III) or 328 amino acids (IV), given in the specification, or a fragment of (III) or (IV); or
(b) an allelic variant of the nucleotide sequence, which encodes a polypeptide comprising (III) or (IV), is new.
DETAILED DESCRIPTION - A new isolated nucleic acid molecule comprises:
(a) a nucleotide sequence:
(i) having 1011 base pairs (I) or 987 bp (II), given in the specification; or

(ii) encoding a polypeptide having 336 amino acids (III) or 328 amino acids (IV), given in the specification, or any unique fragment of (III) or (IV) that is greater than ten amino acids in length; or

(b) an allelic variant of the nucleotide sequence, which encodes a polypeptide comprising (III) or (IV).

The allelic variant contains 80 % nucleic acid homology and hybridizes to the complement of (I) under highly stringent conditions equivalent to hybridization in 42 deg. C in a hybridization solution comprising 50 % formamide, 1 % sodium dodecyl sulfate (SDS), 1M NaCl, 10% Dextran sulfate, and washing twice for 30 minutes in a wash solution comprising 0.1 multiply saline sodium citrate (SSC) and 1 % SDS.

INDEPENDENT CLAIMS are also included for the following:

(1) a vector comprising the isolated nucleic acid molecule;

(2) a host cell genetically engineered to contain the nucleic acid molecule or the vector;

(3) the human **G protein**-coupled receptor (IGPcR) protein, IGPcR20 of (III), the mouse IGPcR20 protein of (IV), or any of their unique fragments with a sequence having greater than ten amino acids in length, including but not limited to polypeptides, peptides, isolated domains or fusion proteins;

(4) antibodies specifically targeting the IGPcR20 proteins, and/or polypeptides, peptides, isolated domains, and the IGPcR20 component of fusion proteins of the IGPcR20 proteins;

(5) agonists and antagonists of IGPcR20 protein that compete selectively with native natural IGPcR20 ligand and which modulate IGPcR20 gene expression or gene product activity, including:

(a) small molecules of molecular mass less than 6 kDa;

(b) molecules of intermediate size, having a molecular mass between 5 - 15 kDa; and

(c) large molecules of molecular mass greater than 12 kDa, the latter including mutant natural IGPcR20 ligand proteins that compete with native natural IGPcR20 ligand and which modulate IGPcR20 gene expression or gene product activity;

(6) antisense and ribozyme molecules that can be used to inhibit IGPcR20 gene expression or expression constructs used to enhance IGPcR20 gene expression;

(7) methods of identifying compounds of (5) or (6), which modulate the activity of IGPcR20 or IGPcR20 gene expression;

(8) embryonic stem cells containing the disrupted endogenous IGPcR20 gene;

(9) non-human knock-out animals that do not express IGPcR20, where the endogenous animal ortholog of the IGPcR20 gene is functionally disrupted;

(10) mutated non-human animals that express a non-functional or partially functional form of IGPcR20;

(11) a non-human transgenic animal model expressing the human IGPcR20 cDNA sequence, or (I) or (II);

(12) progeny of the non-human animals, including both heterozygous and homozygous offspring;

(13) identifying compounds for modulating the activity of the protein for treating diseases characterized by aberrant expression or activity of IGPcR20; and

(14) a method or a gene therapy method of preventing, ameliorating or treating diseases characterized by aberrant expression or activity of IGPcR20 by administrating compounds that specifically bind to the IGPcR20 gene or protein and /or which modulate IGPcR20 expression or activity, or by administrating vectors and/or host cells containing nucleotide sequences (the new nucleic acid, (1) and (2)) that modulate IGPcR20 expression or activity.

ACTIVITY - Vasotropic; cardiovascular; cytostatic; neuroprotective; cerebroprotective; neuroleptic; nephrotropic; gastrointestinal; antiinflammatory; immunosuppressive; antiallergic; gynecological; antiinfertility; immunostimulant; tranquilizer; antidepressant; antiParkinsonian; nootropic; anticonvulsant; antimigraine; antianginal; anticoagulant; thrombolytic; vasotropic; osteopathic; antibacterial; antidiabetic. No biological data is given.

MECHANISM OF ACTION - Gene therapy; human G protein-coupled receptor

(IGPcR20) agonist/antagonist.

USE - The IGPcR20 gene or protein encoded by it is useful for drug screening, and diagnosing or treating diseases and disorders, particularly cancer, reproductive disorders and infertility related to epididymal dysfunction, pain, or metabolic and inflammatory disorders. In particular, the IGPcR20 gene or protein is useful for treating or diagnosing psychiatric and central nervous system (CNS) disorders (e.g. schizophrenia, episodic paroxysmal anxiety (EPA), phobia or panic, major depressive disorder, Parkinson's disease, Alzheimer's disease/dementia and neurodegenerative diseases, severe mental retardation, dyskinesias, Huntington's disease, Gille de la Tourette's syndrome, sleep disorders, epilepsy, migraine, or attention deficit/hyperactivity disorder), cardiovascular diseases (e.g. angina pectoris, cerebral vasospasm, thrombosis or Raynaud's disease), kidney disease, gastrointestinal disorders, osteoporosis, inflammation, infection, immune disorders, autoimmune diseases, allergies, endotoxin shock, sepsis, complication of diabetes mellitus, or gynecological and reproductive disorders and male infertility. A non-human animal is useful for the dissection of the molecular mechanisms of the IGPcR20 pathway, and for the identification and cloning of genes able to modify, reduce or inhibit the phenotype associated with IGPcR20 activity or deficiency. The animal model is useful for the identification of gene and protein diagnostic markers for diseases, for the identification and testing of compounds useful in the prevention, amelioration or treatment of diseases associated with IGPcR20 activity or deficiency. The disease comprises diseases associated with signal processing in male reproductive tissues, particularly testis or epididymis (all claimed).

Dwg.0/10

TECH UPTX: 20020313

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preparation: The nucleic acid is prepared by standard oligonucleotide synthesis techniques.

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Nucleic Acid: The nucleic acid comprises a nucleotide sequence, which encodes the polypeptides, peptides or fusion proteins comprising an amino acid sequence that is 70 % similar to (III) or (IV). The nucleic acid is operatively linked with a nucleotide regulatory sequence capable of controlling expression of the nucleic acid molecule in a host cell or non-human animal.

Preferred Host Cell: The host cell is a eukaryotic cell, particularly a yeast cell, an insect cell or a mammalian cell.

Preferred Animal: The endogenous animal ortholog of the IGPcR20 gene is functionally disrupted by an homologous recombination method. The human IGPcR20 is encoded by a nucleic acid sequence that is homozygous in the animal model. The animal is from a genus consisting of Mus (e.g. mice), Rattus (e.g. rats), Otyctologus (e.g. rabbits) and Mesocricetus (e.g. hamsters).

Preferred Method: In (14), the disease is pain, cancer, metabolic and inflammatory disorders, or reproductive disorders and infertility.

Preparation: The nucleic acid is prepared by standard expression cloning techniques and by a degenerate polymerase chain reaction.

L13 ANSWER 10 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-049533 [06] WPIDS
DNN N2002-036590 DNC C2002-014019
TI New polynucleotide, useful for treating Alzheimer's disease, Parkinson's disease, Huntington's chorea, diabetes and tumors, comprises isolated polynucleotide encoding human follicle stimulating hormone-like G **-protein** coupled receptor.
DC B04 D16 S03
IN RAMAKRISHNAN, S
PA (FARB) BAYER AG
CYC 95
PI WO 2001088127 A2 20011122 (200206)* EN 98p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC

LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001069014 A 20011126 (200222)
EP 1287135 A2 20030305 (200319) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
ADT WO 2001088127 A2 WO 2001-EP5613 20010517; AU 2001069014 A AU 2001-69014 20010517; EP 1287135 A2 EP 2001-947285 20010517, WO 2001-EP5613 20010517
FDT AU 2001069014 A Based on WO 2001088127; EP 1287135 A2 Based on WO 2001088127
PRAI US 2000-205057P 20000518
AB WO 200188127 A UPAB: 20020128
NOVELTY - An isolated polynucleotide (I) encoding a human follicle stimulating hormone-like **G-protein** coupled receptor (FSH-like GPCR) polypeptide, is new.

DETAILED DESCRIPTION - Isolated polynucleotide encoding a FSH-like GPCR polypeptide, is selected from the following:

(i) a polynucleotide encoding a fully defined sequence of 191 (S1) amino acids, as given in the specification, or an amino acid sequence at least 50% identical to (S1);

(ii) a polynucleotide comprising a fully defined sequence comprising 575 (S2) base pairs, as given in the specification;

(iii) a polynucleotide which hybridizes under stringent conditions to (S2);

(iv) a polynucleotide the sequence of which deviates from the above mentioned polynucleotides due to the degeneration of the genetic code, and a fragment, derivative or allelic variant of the above mentioned polynucleotides.

INDEPENDENT CLAIMS are also included for the following:

(1) an expression vector (II) containing (I);

(2) a host cell (III) containing (II);

(3) a substantially purified FSH-like GPCR polypeptide (IV) encoded by (I);

(4) production of (I);

(5) detecting (M1) (I) in a biological sample, comprising:

(i) hybridizing (I) to a nucleic acid material of a biological sample, to form a hybridization complex; and

(ii) detecting the hybridization complex;

(6) detecting (M2) (I) or (IV), comprising contacting a biological sample with a reagent which specifically interacts with (I) or (IV);

(7) a diagnostic kit (V) for conducting M1 or M2;

(8) screening (M3) for agents which decrease the activity of FSH-like GPCR, comprising:

(i) contacting a test compound with (I) or (IV); and

(ii) detecting binding of the test compound to (I) or (IV), where a test compound which binds to (I) or (IV) is identified as a potential therapeutic agent for decreasing the activity of the FSH-like GPCR;

(9) screening (M4) for agents which regulate the activity of human FSH-like GPCR comprising:

(i) contacting a test compound with (IV);

(ii) detecting FSH-like GPCR activity of (IV);

(iii) contacting a test compound with a polypeptide comprising (S2) or a sequence 50% identical to (S2); and

(iv) detecting binding of the test compound to the polypeptide, where the test compound which binds to polypeptide is identified as a potential agent for regulating or modulating the activity of (IV);

(10) reducing (M5) the activity of FSH-like GPCR;

(11) a reagent (VI) that modulates the activity of (IV) or (I), which is identified by (M3) or (M4);

(12) a pharmaceutical composition (VII), comprising (II) or (VI);

(13) a fusion protein (VIII) comprising (IV);

(14) detecting (M6) a coding sequence for (IV), comprising hybridizing a polynucleotide comprising 11 contiguous nucleotides of (S1) to a nucleic acid material of a biological sample, to form a hybridization complex and detecting the hybridization complex;

(15) detecting (M7) (IV), comprising:

(i) contacting a biological sample with a reagent that specifically

binds to (IV) to form a reagent-polypeptide complex; and
(ii) detecting the reagent-polypeptide complex;
(16) a kit (IX) for detecting a coding sequence for (IV) comprises a polynucleotide comprising 11 contiguous nucleotides of S1, and instructions for M6;
(17) a kit (X) for detecting (IV) comprises an antibody which specifically binds to (IV) and instructions for M7;
(18) reducing (M8) activity of (V), comprising contacting a cell with a reagent which specifically binds to a product encoded by a polynucleotide comprising S1, where the activity of FSH-like GPCR is reduced; and
(19) a pharmaceutical composition (XI) comprising a reagent which specifically binds to (IV) or to a product of a polynucleotide comprising S1, or an expression vector encoding (IV).
ACTIVITY - Cytostatic; antidiabetic; osteopathic; antimigraine; nootropic; neuroprotective; antiparkinsonian; antitumor, antiasthmatic; antiulcer; antiallergic; antigout; cerebroprotective; antiinfertility; contraceptive; anorectic; antianginal; tranquilizer; hypotensive; antidepressant; neuroleptic; antiemetic; anticonvulsant; cardiant; analgesic; depilatory. No biological data was provided.
MECHANISM OF ACTION - Modulator of (I) or (IV) (claimed); gene therapy. No biological data was provided.
USE - (VI) which inhibits a function of (IV), is useful for treating urinary incontinence or benign prostatic hypertrophy, by administering (VI) that inhibits a function of (IV), where symptoms of urinary incontinence or benign prostatic hypertrophy are ameliorated. (VI) is useful for treating a FSH-like GPCR disorder such as obesity, diseases related to obesity, cancer, diabetes, osteoporosis, anxiety, depression, hypertension, migraine, compulsive disorder, schizophrenia, autism, neurodegenerative disorder and cancer chemotherapy-induced vomiting. (VII) is useful for modulating the activity of FSH-like GPCR in the above mentioned diseases (claimed). (I) is useful in diagnostic assays for detecting diseases and abnormalities or susceptibility to diseases and abnormalities related to the presence of mutations in (I). (I) or (IV) is useful for treating neurodegenerative disorders such as Alzheimer's disease, Parkinson's disease, Huntington's chorea, diabetes, tumor, and in contraceptive applications. (IV) is useful to identify test compounds which may act as agonists or antagonists at the receptor site, for raising antibodies which can block the receptor and effectively prevent ligand binding, and as a bait protein in a two-hybrid or three-hybrid assay. (VI) is useful for treating asthma, acute heart failure, urinary retention, angina pectoris, myocardial infarction, ulcer, allergy, asthma, neurological disorder such as depression, delirium, dementia, dyskinesias such as Huntington's disease or Tourette's syndrome, bulimia, anorexia, cardiovascular ailments, sleep and eating disorders, pain control, disorders involving regulation of body temperature and blood pressure, gout, stroke, reduced fertility, complications of pregnancy, menstrual irregularities, hirsutism, and stress incontinence. (VIII) is useful for generating antibodies against (IV) and in various assay systems.
Dwg.0/4

TECH UPTX: 20020128
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preparation: (IV) is prepared by culturing (III) under conditions suitable for the expression of (IV), and recovering (IV) from the culture or isolating (IV). Preferred Polynucleotide: (I) is a cDNA. Preferred Method: In M1 or M6, before hybridization, the nucleic acid material is amplified. In M4, the contacting step takes place in a cell which is in vitro, or in a cell-free system. The polypeptide or the test compound comprises a detectable label. The test compound displaces a detectable label or a labeled ligand which is bound to the polypeptide. The polypeptide or the test compound is bound to a solid support. The activity of the polypeptide is cyclic AMP formation, mobilization of intracellular calcium or phosphoinositide metabolism. The product encoded by a polypeptide which comprises S1 is a polypeptide or RNA. In M7, the reagent is an antibody. In M8, the product is a polypeptide or RNA. The reagent is an antisense oligonucleotide, ribozyme or an antibody. The cell is in vitro. Preferred Composition: In (X), the reagent is an antibody, ribozyme or an antisense oligonucleotide.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - (IV) may also be prepared by standard chemical techniques.

L13 ANSWER 11 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2001-273379 [28] WPIDS
DNN N2001-195281 DNC C2001-082850
TI New isolated gamma-carboxyglutamine containing peptide for treating or preventing neurological and psychiatric disorders e.g. epilepsy, Alzheimer's disease, migraine, chemical toxicity, dystonia, anxiety, and depression.
DC B04 C03 S03
IN GARRETT, J E; JONES, R M; MCINTOSH, J M; OLIVERA, B M; WALKER, C S; WATKINS, M
PA (COGN-N) COGNETIX INC; (UTAH) UNIV UTAH RES FOUND; (GARR-I) GARRETT J E; (JONE-I) JONES R M; (MCIN-I) MCINTOSH J M; (OLIV-I) OLIVERA B M; (WALK-I) WALKER C S; (WATK-I) WATKINS M
CYC 95
PI WO 2001018033 A1 20010315 (200128)* EN 102p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000073660 A 20010410 (200137)
EP 1214335 A1 20020619 (200240) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
JP 2003508091 W 20030304 (200319) 117p
US 2003144210 A1 20030731 (200354)
ADT WO 2001018033 A1 WO 2000-US24816 20000908; AU 2000073660 A AU 2000-73660 20000908; EP 1214335 A1 EP 2000-961746 20000908, WO 2000-US24816 20000908; JP 2003508091 W WO 2000-US24816 20000908, JP 2001-522256 20000908; US 2003144210 A1 Provisional US 1999-153034P 19990910, Provisional US 2000-219673P 20000721, Cont of US 2000-658603 20000908, US 2002-207780 20020731
FDT AU 2000073660 A Based on WO 2001018033; EP 1214335 A1 Based on WO 2001018033; JP 2003508091 W Based on WO 2001018033
PRAI US 2000-219673P 20000721; US 1999-153034P 19990910; US 2000-658603 20000908; US 2002-207780 20020731
AB WO 200118033 A UPAB: 20010522
NOVELTY - An isolated peptide (I) that is a gamma -carboxyglutamine containing conopeptide and that has one of 41 sequences, given in the specification, is new.
DETAILED DESCRIPTION - A new isolated peptide is a gamma -carboxyglutamine containing conopeptide and has one of 41 sequences, given in the specification, such as (S1 - S6).
Gly Xaa1 Asp Xaa1 Val Ser Gln Met Ser Xaa2 Xaa1 Ile Leu Arg Xaa1 Leu Glu Leu Gln Xaa2 (S1; conopeptide JG001)
Gly Xaa1 Xaa1 Xaa1 Xaa3 Gln Xaa1 Asn Gln Xaa1 Leu Ile Arg Xaa1 Xaa2 Ser Asn (S2; conantokin-G(L5Y))
Gly Glu Asp Xaa1 Val Ser Gln Met Ser Xaa2 Xaa1 Ile Leu Arg Xaa1 Leu Xaa2 Xaa2 Xaa2 Xaa2 (S3; conopeptide-A)
Xaa3 Xaa3 Xaa1 Xaa1 Asp Arg Leu Arg Arg Xaa4 Leu Ala Asn Ser Xaa2 Xaa2 (S4; conopeptide-R2)
Gly Xaa3 Xaa1 Xaa1 Asp Arg Xaa1 Ile Ala Xaa1 Thr Val Arg Xaa1 Leu Xaa1 Xaa1 Ala (S5; conopeptide-Vr2)
Ile Val Arg Gln Gln Xaa1 Cys Ile Arg Asn Asn Asn Asn Arg Xaa5 Xaa4 Cys Xaa5 Xaa2 (S6; conopeptide-Cn)
Xaa1 = Glu or gamma -carboxyglutamic acid (Gla);
Xaa2 = Lys; nor-Lys; N-methyl-Lys; N,N-dimethyl-Lys; or N, N, N-trimethyl-Lys;
Xaa3 = Tyr' mono-halo-Tyr, di-halo-Tyr; O-sulpho-tyr; O-phospho-Tyr; or nitro-Tyr;
Xaa4 = Trp (D or L) or halo-Trp (D or L);
Xaa5 = Pro or hydroxy-Pro;

halo = chlorine, bromine (preferably for Trp), or iodine (preferably for Tyr).

INDEPENDENT CLAIMS are also included for he following:

(1) a derivative (II) of (I) in which:

(i) Arg is substituted by Lys, ornithine, homoargine, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, or any synthetic basic amino acid;

(ii) Lys is substituted by Arg, ornithine, homoargine, nor-Lys, or any synthetic basic amino acid;

(iii) Tyr is substituted with meta-Tyr, ortho-Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr, or any synthetic hydroxy containing amino acid;

(iv) Ser is substituted with Thr or any synthetic hydroxylated amino acid;

(v) Thr is substituted with Ser or any synthetic hydroxylated amino acid;

(vi) Phe is substituted with any aromatic amino acid;

(vii) Trp is substituted with Trp(D), neo-Trp, Halo-Trp (D or L), or any aromatic synthetic amino acid;

(viii) Asn, Ser, Thr or Hyp are glycosylated;

(ix) Tyr is substituted with the 3-hydroxyl or 2-hydroxyl isomers (meta-Tyr or ortho-Tyr, respectively) and corresponding O-sulpho and O-phospho derivatives;

(x) acidic amino acids are substituted with any synthetic amino acid, e.g. tetrazolyl derivatives of Gly and Ala; and/or

(xi) the aliphatic amino acids are substituted by synthetic derivatives bearing non-natural aliphatic branched or linear side chains CnH2n+2 up to and including n=8;

(2) an isolated nucleic acid encoding a conopeptide propeptide with one of 28 amino acid sequences, given in the specification;

(3) an isolated conopeptide propeptide having one of 28 amino acid sequences, given in the specification;

(4) treating or preventing (M1) disorders in which the pathophysiology involves excess excitation of nerve cells by excitatory amino acids or agonists of heterogenous ionotropic glutamate receptors or heterogenous G protein coupled glutamate receptors, comprising administering (I) or a pharmaceutical salt of (I);

(5) treating (M2) memory or cognitive deficits, HIV (human immunodeficiency virus) infection, or ophthalmic indications, comprising administering (I) or a pharmaceutical salt of (I); and

(6) controlling (M3) nematodes or parasitic worms, comprising applying an effective amount of (I) to the locus to be protected.

ACTIVITY - Anticonvulsant; vasotropic; cerebroprotective; tranquilizer; vulnerary; cardiant; antidiabetic; nootropic; neuroprotective; antiparkinsonian; neuroleptic; anti-HIV; analgesic; antimigraine; antidote; uropathic; muscular; antidepressant; ophthalmological; anthelmintic; antiviral. The antiparkinsonian potential of conopeptide JG001 was examined in rats wit unilateral lesions of the nigrostriatal dopamine system. JG001 (0.5, 5.0, or 50 mM) or a control vehicle were delivered at a rate of 1 micro l/min for a total injection of 2 micro l (1 nmol/2 micro l). Fifteen minutes later, L-Dopa was injected. A video of the rats was made to follow the behavior potential of the treatment. The tested compound reversed the behavioral deficits induced by dopamine depletion.

MECHANISM OF ACTION - Excitatory amino acid receptor antagonist; ionotropic glutamate receptor antagonist; G-protein coupled glutamate receptor antagonist.

USE - (I) is used to treating or preventing disorders in which the pathophysiology involves excess excitation of nerve cells by excitatory amino acids or agonists of heterogenous ionotropic glutamate receptors or heterogenous G protein coupled glutamate receptors. The disorders may be neurological disorders, such as:

(i) seizure associated with epilepsy;

(ii) a neurotoxic injury associated with hypoxia, anoxia, ischemia, stroke, cerebrovascular accident, brain or spinal cord trauma, myocardial infarct, physical trauma, drownings, suffocation, perinatal asphyxia, or hypoglycemic events;

(iii) neurodegeneration associated with Alzheimer's disease, Huntington's disease, senile dementia, Amyotrophic Lateral Sclerosis, multiple sclerosis, Parkinson's disease, Down's Syndrome, Korsakoff's disease, schizophrenia, AIDS (acquired immunodeficiency syndrome) dementia from HIV infection, HIV infection, multi-infarct dementia, Binswanger dementia and neuronal damage associated with uncontrolled seizures;

(iv) pain which is a migraine, acute pain, or persistent pain;

(v) chemical toxicity which is addiction, morphine tolerance, opiate tolerance, opioid tplerance and barbiturate tolerance; and

(vi) dystonia (movement disorder), urinary incontinence (preferred), muscle relaxation or sleep disorder.

The disorders may be psychiatric disorders, such as, anxiety, major depression, manic-depressive illness, obsessive-compulsive disorder, schizophrenia, or mood disorders (bipolar disorder, unipolar depression, dysthymia, or seasonal effective disorder). (I) is also used to treat memory or cognitive deficits, HIV (human immunodeficiency virus) infections, ophthalmic indications, or to control nematodes or parasitic worms (all claimed).

Dwg.0/0

TECH UPTX: 20010522

TECHNOLOGY FOCUS - BIOLOGY - Preparation: (I) is prepared by standard isolation and purification techniques from specific Conus species (snail).

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preparation: (I) is prepared by standard solid-phase techniques, partial solid-phase techniques, fragment condensation, or by classical solution couplings.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Method: In (M1), the disorder is a neurologic or psychiatric disorder. The neurologic disorder is a seizure which is associated with epilepsy. The neurologic disorder is a neurotoxic injury associated with conditions of hypoxia, anoxia or ischemia. The neurotoxic injury is associated with stroke, cerebrovascular accident, brain or spinal cord trauma, myocardial infarct, physical trauma, drownings, suffocation, perinatal asphyxia, or hypoglycemic events. The neurologic disorder is neurodegeneration associated with Alzheimer's disease, Huntington's disease, senile dementia, Amyotrophic Lateral Sclerosis, multiple sclerosis, Parkinson's disease, Down's Syndrome, Korsakoff's disease, schizophrenia, AIDS (acquired immunodeficiency syndrome) dementia from HIV infection, HIV infection, multi-infarct dementia, Binswanger dementia and neuronal damage associated with uncontrolled seizures. The neurologic disorder is pain which is a migraine, acute pain, or persistent pain. The neurologic disorder is chemical toxicity which is addiction, morphine tolerance, opiate tolerance, opioid tolerance and barbiturate tolerance. The neurologic disorder is dystonia (movement disorder), urinary incontinence (preferred), muscle relaxation or sleep disorder. The psychiatric disorder is anxiety, major depression, manic-depressive illness, obsessive-compulsive disorder, schizophrenia, or mood disorder. The mood disorder is bipolar disorder, unipolar depression, dysthymia, or seasonal effective disorder.

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Nucleic Acid: The nucleic acid encoding (I) comprises one of 28 nucleotide sequences, given in the specification.

Preparation: (I) is produced by standard recombinant techniques.

L13 ANSWER 12 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2000-578539 [54] WPIDS
DNC C2000-172208
TI Novel soluble mammalian polypeptide composition comprising **adenylyl cyclase** activity for screening stimulators and inhibitors of **adenylyl cyclase**, is activated by **Gsalpha**.
DC B04 D16
IN GILMAN, A G; TANG, W
PA (TEXA) UNIV TEXAS SYSTEM
CYC 1
PI US 6107076 A 20000822 (200054)* 73p

ADT US 6107076 A Provisional US 1995-5498P 19951004, US 1996-726214 19961004
PRAI US 1995-5498P 19951004; US 1996-726214 19961004
AB US 6107076 A UPAB: 20001027
NOVELTY - A soluble mammalian polypeptide composition (I) having **adenylyl cyclase** (AC) activity and activated by **Gs alpha** , is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a polynucleotide (II) encoding (I);
(2) a polynucleotide (IIa) comprising a coding region for AC C1 domain or C2 domain;
(3) an expression vector (III) comprising (II) operably linked to a promoter;
(4) an expression vector (IIIa) comprising (IIa) and lacking a coding region for AC domain that is membrane bound in situ; and
(5) a host cell (IV) comprising (III) or (IIIa).
ACTIVITY - Cytostatic; vasotropic; cardiant.
MECHANISM OF ACTION - **Adenylyl cyclase** modulator.
No supporting data given.
USE - (I) is useful for screening inhibitors and stimulators of **adenylyl cyclase** activity. Inhibitors of AC are useful for treating cholera, pituitary tumors, heart failure, ischemia, endocrine disorders and cell necrosis. Stimulator of AC is useful for treating pseudohypoparathyroidism and other endocrine deficiencies.
ADVANTAGE - As the recombinant AC lacks membrane bound domain, separation and purification of enzyme has become easier paving way for easier screening of compounds that stimulate and inhibit AC activity.
DESCRIPTION OF DRAWING(S) - The figure shows the model of mammalian **adenylyl cyclase**.
Dwg.1A/15
TECH UPTX: 20001027
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Polypeptide: (I) comprises one or more polypeptides that lack transmembrane regions and a chimera of AC C1 and C2 domains linked covalently, preferably type I-C1 and type II-C2, and lacks membrane bound domains. Type I-C1 has a C1a domain and type II-C2 has a C2a domain which are joined by a linker polypeptide having a sequence AAAGGM, AAAGGMPPAAAGGM or AAAGGM(PPAAAGGM)2. (I) forms a complex comprising two distinct polypeptides, (I) is AC type I or type V-C1 domain and type II-C2 domain. Preferred Polynucleotide: (II) does not encode transmembrane region and encodes a chimera of AC C1 and C2 domains. (III) comprises a polynucleotide encoding alpha subunit of G protein operably linked to a promoter active in a host cell. Preferred Cell: (IV) is a bacterial or baculovirus replication supporting cell.

L13 ANSWER 13 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2000-116269 [10] WPIDS
DNC C2000-035419
TI Novel **G-protein** coupled transmembrane receptor for use in the treatment and diagnosis of diseases such as diabetes and Parkinson's disease.
DC B04 D16
IN BERGSMA, D J; ELSHOURBAGY, N; SHABON, U; BERGSMA, D
PA (SMIK) SMITHKLINE BEECHAM CORP
CYC 21
PI WO 9955734 A1 19991104 (200010)* EN 40p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP
US 6071722 A 20000606 (200033)
EP 1104440 A1 20010606 (200133) EN
R: BE CH DE DK FR GB IT LI NL
JP 2002512781 W 20020508 (200234) 48p
ADT WO 9955734 A1 WO 1999-US8605 19990420; US 6071722 A Provisional US 1998-82981P 19980424, Provisional US 1998-89639P 19980617, US 1999-251373 19990216; EP 1104440 A1 EP 1999-918690 19990420, WO 1999-US8605 19990420; JP 2002512781 W WO 1999-US8605 19990420, JP 2000-545892 19990420
FDT EP 1104440 A1 Based on WO 9955734; JP 2002512781 W Based on WO 9955734
PRAI US 1999-251373 19990216; US 1998-82981P 19980424; US 1998-89639P

19980617
AB WO 9955734 A UPAB: 20000228
NOVELTY - An isolated polypeptide (I), comprising (part of) or at least 70% (preferably 95%) of a 370 amino acid polypeptide (P) as given in the specification and coding for AXOR1, a **G-protein** coupled seven transmembrane receptor family of polypeptide, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) encoding (I), comprising (part of) or at least 70% (preferably 95%) of a 1113 bp sequence given in the specification;

(2) a polynucleotide (N) complementary to (II);

(3) an antibody (III) immunospecific for (I);

(4) screening to identify compounds (C) which stimulate or inhibit the function of (I) comprising:

(a) measuring the binding of labeled (indirectly or directly) (C) to (I) or to cells or membranes bearing (I) or to its fusion protein;

(b) measuring the binding of the same components in the presence of a labeled competitor;

(c) testing for the signal generated by activation or inhibition of (I) by (C) using detection systems appropriate to the cells or cell membranes bearing (I); or

(d) mixing (C) with a solution containing (I), measuring activity of (I) and comparing it to the standard; or

(e) detecting the effect of (C) on production of mRNA encoding (I) in cells, using assays e.g. ELISA assay;

(5) an agonist or antagonist of (I);

(6) an expression system comprising (II) in a compatible host cell (H) producing (I);

(7) (H) produced by (6);

(8) (II) obtained by screening appropriate library under stringent conditions with a labeled probe comprising (I) or (II); and

(9) a screening kit for identifying agonists, antagonists, ligands, receptors, substrates and enzymes of (I) comprising the polypeptide, the recombinant cell and cell membrane expressing it and antibody to it.

ACTIVITY - Antibacterial; Antiviral; Antifungal; Antiasthmatic; Antianginal; Antiallergic; Cytostatic; Antidiabetic; **Antidepressant**; Neuroleptic; Nootropic; Anticonvulsant; Hypertensive; Tranquilizer; Cardiant; Antimigraine; Antimanic; Anorectic; Osteopathic; Antiparkinsonian.

MECHANISM OF ACTION - AXOR-1 receptor activator or inhibitor.

USE - (I) is used for diagnosing disease or its susceptibility in a subject (S) related with expression or activity of (I), by determining the presence or absence of mutation in (II) in the genome of (S) and/or analysing for the presence of the expression of (I) in a sample derived from (S). It is also used for identifying agonists and antagonists to (I) which is in turn used for treating (S) in need of enhanced activity or inhibition of (I). Enhanced activity is also obtained by providing (S) with (II). Inhibition of (I) is achieved by administering (S) with a nucleic acid molecule inhibiting expression of (II) and/or by a polypeptide that competes with (I) for its ligand, substrate or receptor (claimed). Thus (I) and/or (II) can be used to treat conditions such as bacterial, fungal, viral infections, particularly HIV-1 or 2, cancers, diabetes, obesity, anorexia, bulimia, asthma, Parkinson's disease, acute heart failure, hypotension, hypertension, urinary retention, osteoporosis, angina pectoris, myocardial infarction, stroke, ulcers, asthma, allergies, benign prostatic hypertrophy, migraine, vomiting, psychotic, neurological disorders and dyskinesias. (I) is used for the identification of membrane bound or soluble receptors through standard receptor binding techniques and also for structure based design of agonist, antagonist or inhibitor of the polypeptides. (I) can also be used as immunogens to produce immunospecific antibodies and to produce an immunological response. (II) is also used to obtain hybridization probes and primers for isolating full-length clones encoding (I). The difference in cDNA or genomic sequence between affected and unaffected individuals is determined to identify mutation causing the disease. It is also valuable for chromosome identification.

Dwg.0/0
TECH UPTX: 20000228
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Preparation: (I) can be produced by synthetic techniques.

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Screening Method: The preferred screening method of agonist and antagonist further includes contacting (C) with cells expressing the receptor polypeptide and measuring the second messenger response or receptor mediated cAMP and/or **adenylate cyclase** accumulation .

L13 ANSWER 14 OF 14 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1996-179715 [18] WPIDS
DNC C1996-056671
TI Method for treating breast cancer - comprises administering genes encoding mutant activated G protein **Gs alpha** or **adenylyl cyclase** 2 to cells or tissues.
DC B04 D16
IN SRINIVAS, R V I; IYENGAR, S R V; SRINIVAS, R V
PA (MOUN) MOUNT SINAI SCHOOL MEDICINE; (IYEN-I) IYENGAR S R V
CYC 19
PI WO 9608260 A1 19960321 (199618)* EN 96p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU JP US
AU 9537179 A 19960329 (199628)
US 6034071 A 20000307 (200019)
ADT WO 9608260 A1 WO 1995-US11808 19950915; AU 9537179 A AU 1995-37179 19950915; US 6034071 A US 1994-307896 19940916
FDT AU 9537179 A Based on WO 9608260
PRAI US 1994-307896 19940916
AB WO 9608260 A UPAB: 19960503
A novel method for treating breast cancer in humans comprises introducing a gene encoding a mutant activated **Gsalpha*** or a gene encoding **adenylyl cyclase** 2 into malignant mammary cells, resulting in a reduction or reversion of the malignant phenotype.
USE - The mutant activated transduction G protein, **Gsalpha*** suppresses proliferation and expression of the transformed phenotype in certain cells. **Adenylyl cyclase** 2 is specifically activated and modified by protein kinase C, allowing tissue-selective increases in cAMP levels by growth factors and other proliferative agents. They are hence both useful agents for cancer therapy, esp. breast cancer.
Dwg.0/15